Creel Census and Biological Data from the Lake Trout Sport Fishery on Great Bear and Great Slave Lakes, Northwest Territories ,1979

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CREEL CENSUS AND BIOLOGICAL DATA FROM THE LAKE TROUT SPORT FISHERY ON GREAT BEAR AND GREAT SLAVE LAKES, NORTHWEST TERRITORIES, 1979

by

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ABSTRACT

Falk, M.R., D.V. Gillman, and M.M. Roberge. 1982. Creel census and biological data from the lake trout sport fishery on Great Bear and Great Slave lakes, Northwest Territories, 1979. Can. Data Rep. Fish. Aquat. Sci. 307: v + 22 p.

Data from a creel census and biological sampling program carried out at two sport fishing lodges on Great Bear and Great Slave lakes in 1979 are presented. Results from experimental and domestic gillnetting on these lakes in 1977 and 1978 are included. Creel census data includes catch, effort and harvest statistics. Biological information includes length, weight, age, sex and maturity characteristics of lake trout, *Salvelinus namaycush* (Walbaum).

Key words: angling; catch/effort; exploitation; fishery management; gillnetting; monitoring; sport fishing statistics; tagging; *Salvelinus namaycush*.

RESUME

Falk, M.R., D.V. Gillman, and M.M. Roberge. 1982. Creel census and biological data from the lake trout sport fishery on Great Bear and Great Slave lakes, Northwest Territories, 1979. Can. Data Rep. Fish. Aquat. Sci. 307: v + 22 p.

En 1979, on a effectué un recensement et un échantillonnage biologique des poissons pris par des pêcheurs sportifs de deux pavillons sur les lacs Great Bear et Great Slave. Aux données ainsi obtenues on a joint les résultats de la pêche familiale expérimentale aux filets maillants pour les années 1977 et 1978 sur ces mêmes lacs. Les données pour la pêche des pêcheurs sportifs portent sur le nombre de poissons pris et le temps dépensé. Les données de l'échantillonnage biologique portent sur la longueur, le poids, l'âge, le sexe et le degré de maturité du touladi, le *Salvelinus namaycush* (Walbaum).

Mots-clés: pêche a la ligne; prises/effort; exploitation; aménagement des pêches; pêche aux filets maillants; contrôle; statistiques sur la pêche sportive; étiquetage; *Salvelinmus namaycush*.

INTRODUCTION

The sport fishery on Great Bear and Great Slave lakes has been under investigation since 1972 (Falk et al. 1973, 1974a, 1974b, 1974c, 1975; Moshenko and Gillman 1978, In prep.). Initially (1972-73), a creel census and biological investigation was conducted at all major sport fishing lodges on both lakes (Fig. 1). The study was subsequently reduced to monitor the harvest of game fish (lake trout, Arctic grayling, northern pike) from one lodge per lake each year on a rotational basis. However, commencing in 1977, the work was expanded to include tagging and experimental netting.

The objectives of the investigation are to monitor the harvest of sport fish species, particularly lake trout *Salvelinus namaycush* (Walbaum), to define further possible effects of exploitation and to provide biological data for use in the development of sport fishery management strategies for these lakes.

On 24 January 1978, a U.S.S.R. satellite (Cosmos 954) disintegrated in the air above Great Slave Lake, N.W.T. and scattered radioactive debris across the lake and ENE to the vicinity of Baker Lake. The satellite, containing a highly enriched ^{235}U fueled nuclear reactor power source and radioactive components of the fuel, fission products and activation products were found on the lake ice (AECB, personal communication; R. L. Grasty, Geological Survey of Canada, personal communication). Since Great Slave Lake has an active commercial, domestic and sports fishery, the Department of Fisheries and Oceans (Western Region) was asked to check the major fish species for possible contamination from Cosmos 954 debris. Fish from three locations (Fort Resolution, Snowdrift and Reliance) on Great Slave Lake were obtained by gillnetting under the ice in April, 1978 and from a boat in September 1978. Biological data for lake trout from the Reliance area are presented in tabular form in this report.

This report also presents in tabular form the 1979 creel census data from two sport fishing lodges on Great Bear and Great Slave lakes, biological data on lake trout obtained from experimental gillnetting in these lakes in 1979 and additional biological data on lake trout from the domestic fishery in the Fort Franklin area of Great Bear Lake provided by the Government of the Northwest Territories in 1977 and 1978.

MATERIALS AND METHODS

CREEL CENSUS

During 1979 a creel census was conducted at Great Bear Lodge on Great Bear Lake (Fig 2) and Trophy Lodge on Great Slave Lake (Fig. 3). Details concerning the operation of sport fishing lodges on these lakes have been described previously by Falk et al. (1973, 1974a) and Moshenko and Gillman (1978). The lodges are large isolated fishing establishments catering mainly to anglers from the United States. Lake trout angling is the major attraction but some lodges offer fishing for Arctic grayling *Thymallus arcticus* (Pallas), northern pike *Esox lucius* (Linnaeus) and walleye *Stizostedion vitreum* (Mitchill) as well as side trips to the Arctic coast for anadromous Arctic charr *Salvelinus alpinus* (Linnaeus). The usual length of stay is one week and guests are rotated on or near the weekend.

Information pertaining to the methods employed by creel census workers has been described previously by Falk et al. (1973, 1974a) and Moshenko and Gillman (1978). Upon returning from a day's fishing, as many anglers as possible were questioned as to the number of fish caught, released, retained and used for shore lunches by species as well as the hours and locations fished. Creel census workers also recorded the number of anglers not interviewed and/or those not fishing on a daily basis and the total number of anglers present at the lodge on a weekly basis. Information from the angler's creel at Great Bear Lodge, Great Bear Lake was limited. Lodge policy promotes the release of all lake trout except those fish which are badly damaged or of trophy size. Therefore, few fish were available here for sampling from the angler's creel.

Procedures followed in calculating the total harvest from individual lodges have been outlined by Falk et al. (1974a) and Moshenko and Gillman (1978). Release mortality of angled lake trout was calculated after Falk et al. (1974c).

BIOLOGICAL INVESTIGATION

Biological sampling was conducted as part of the creel census program on Great Bear and Great Slave lakes in 1979. Additional biological information on lake trout was obtained from: experimental gillnetting in the vicinity of the sport fishing lodges censused during 1979 to determine population structure and to capture trout for tagging studies; experimental netting near Reliance on Great Slave Lake during 1978 to obtain fish for radionuclide analysis as part of the Cosmos 954 satellite study and samples from the domestic fishery in the Fort Franklin area of Great Bear Lake provided by the Wildlife Service, Government of the Northwest Territories during 1977 and 1978.

Experimental netting, to capture lake trout for tagging, was conducted in the vicinity of Great Bear Lodge and Trophy Lodge during 1979 using 38 mm (stretch measure) nylon gillnets. Small mesh gillnets were used since they tend to entangle trout by the teeth rather than the gill area and thereby reducing netting mortality. Lake trout captured by gillnet were sampled for fork length (±1 mm), tagged and released.

As part of the Cosmos 954 satellite probe investigation, trout and other fish species were sampled from the Reliance area of Great Slave Lake using 38, 64, 89, 114 and 140 mm (stretch measure) nylon gillnet gangs. While the purpose of the investigation was to obtain fish for radionuclide analysis, all lake trout were sampled for fork length (±1 mm), weight (±50 g), sex, maturity and otoliths (for aging).

Lake trout and other fish species were sampled from the domestic catch in the Keith Arm of Great Bear Lake by the Wildlife Officer from Fort Franklin. Fork length and weight of lake trout were measured in English units and converted to metric equivalents for inclusion in this report. Sex was recorded and otoliths were taken.

Sex and maturity were determined for dead sampled lake trout by examination of the gonads. Relative stages of maturity were coded according to the stages described in Appendix 1. The stages were altered from previous years (1972-78) in order to account for fish which spawned in alternate years. The present system (1979 and on) distinguishes between mature fish which will spawn in the current year (Stages 2 and 7) from mature fish which may spawn in the future (Stages 5 and 10). With the previous system it was difficult to distinguish immature fish (virgin) from mature non-spawning fish (non-virgin).

Sagittal otoliths were obtained from dead sampled lake trout. They were stored dry in envelopes marked with the sample information. In the laboratory, the convex surface of the otolith was ground on a fine carborundum stone to expose the annual growth zones. The otolith was then emersed in a 3:1 solution of benzylbenzoate and methyl salicylate on a depression slide and read under a dissecting microscope.

TAGGING

Lake trout captured by small mesh gillnets and angling were tagged in the vicinity of Great Bear Lodge and Trophy Lodge during 1979. Numbered Floy tags and a Dennison tagging gun (Model DFM-68) were used. Tags were inserted on the left side of the fish near the base of the dorsal fin and anchored through the posterior pterigiophores.

DATA ANALYSIS

Biological data collected during the study were analyzed using an IBM 370/168 computer based at the University of Manitoba and a terminal located at the Freshwater Institute. The Statistical Analysis System (1972) was used to generate length, weight, age, sex and maturity summaries and to perform basic calculations. Some analyses were performed using a Hewlett-Packard programmable calculator (Model 9810-A).

Total annual mortality rates (natural and fishing) were calculated using the methods outlined by Robson and Chapman (1961). An explanation of the method and its development in relation to northern lake trout populations is given by Moshenko and Gillman (1978). Length-weight relationships were determined using the following power equation:

$$\log_{10} W = a + b (\log_{10} L)$$

where:
W = weight in grams
a = Y-intercept
b = slope of the regression line
L = fork length in millimeters

The standard deviation of the coefficient b (S_b) was also calculated.

Relative condition factors (K) were determined using the formula:

$$K = \frac{W \times 10^5}{L^3}$$

ACKNOWLEDGMENTS

The authors appreciate the assistance of summer staff: B. Mills, R. Feland, D. Remnant and B. Mackenzie and the cooperation of Fisheries and Oceans staff based in Yellowknife and Hay River. The management and staff of Great Bear Lodge and Trophy Lodge deserve special thanks for their continued support and cooperation. Mr. E. Hall, Wildlife Officer, Fort Franklin, provided biological information on lake trout from Great Bear Lake. Figures were prepared by Graphics Services, Freshwater Institute. N. Stilwell typed the final draft of the report. Criticism and suggestions were provided by R. Moshenko.

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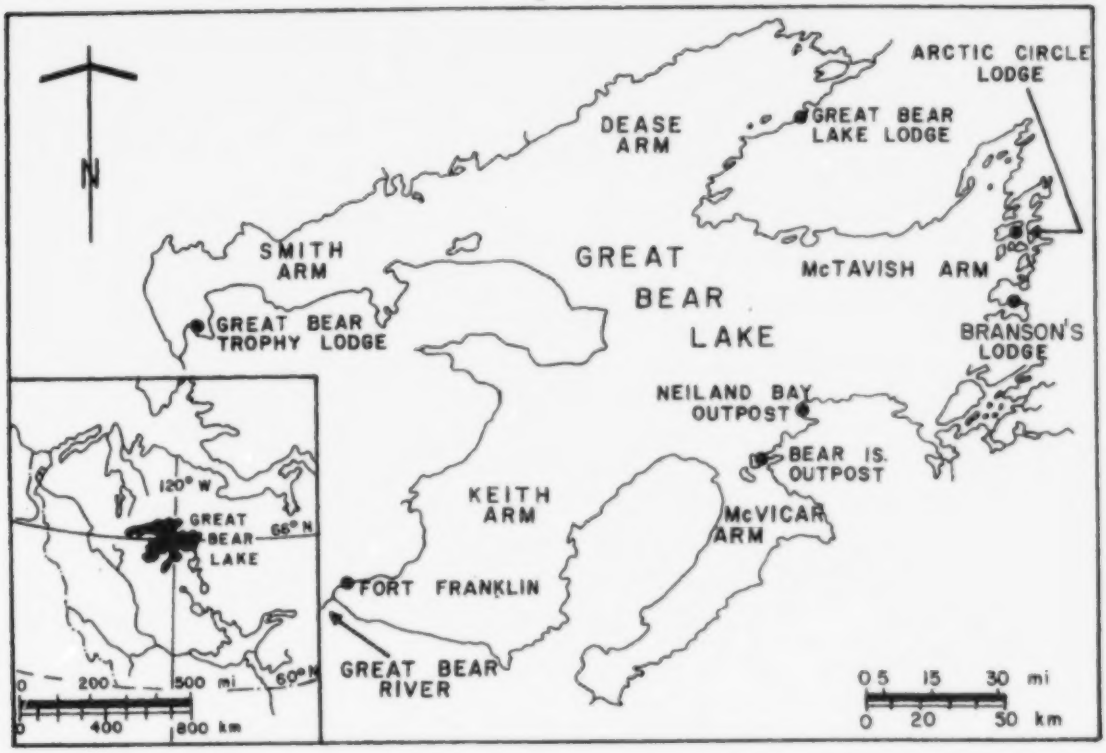

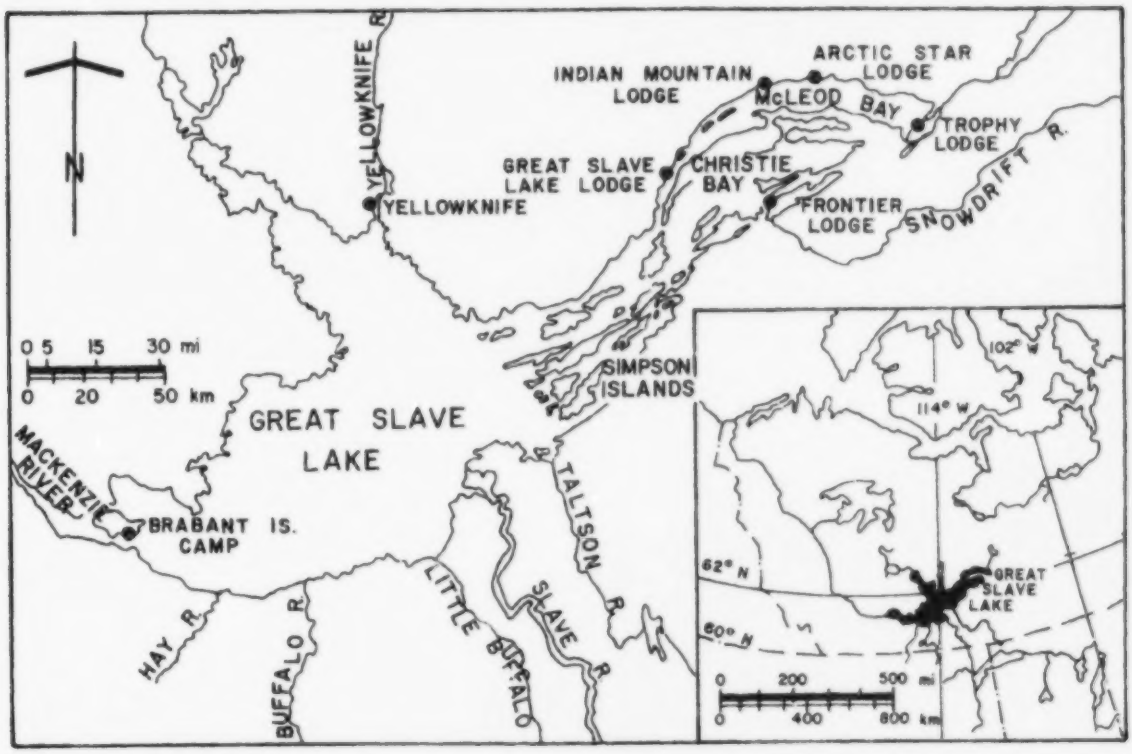

Fig. 1. Maps of Great Bear and Great Slave Lakes showing the locations of sport fishing lodges and outpost camps.

Fig. 2. Map of the Great Bear Lodge area, Great Bear Lake, showing the areas fished, 1979.

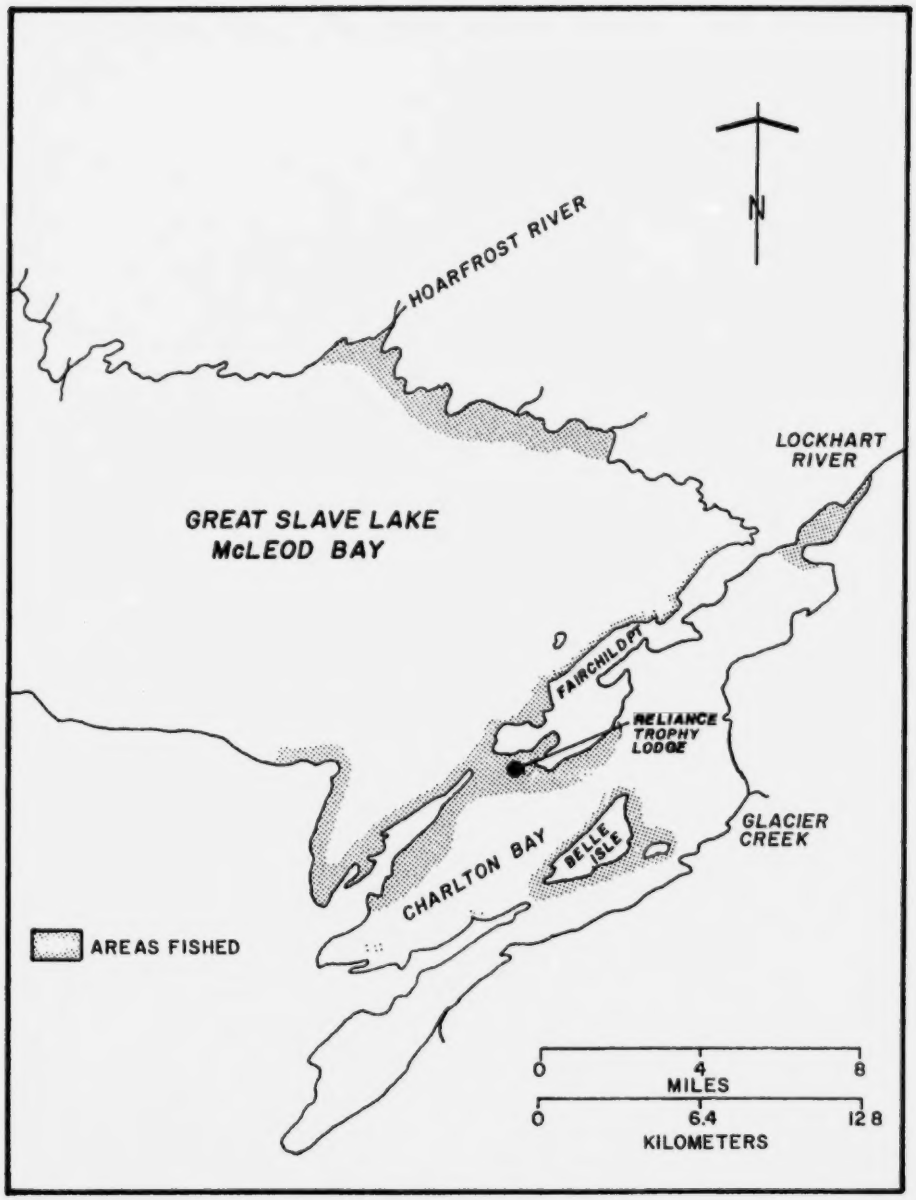

Fig. 3. Map of the Fort Reliance area, Great Slave Lake, showing the areas fished, 1979.

Table 1. Summary of fishing license sales from sport fishing lodges located on Great Bear and Great Slave lakes, 1979.

	1979		
	Resident[a]	Non-Resident	Total
GREAT BEAR LAKE			
Arctic Circle Lodge	99	222	321
Branson's Lodge	107	260	367
Great Bear Lake Lodge (Plummer's)	73	423	496
Great Bear Lodge	10	215	225
Great Bear Trophy Lodge	N/A	N/A	N/A
Sah-Tew Lodge (Fort Franklin)	80	21	101
	369	1141	1510
GREAT SLAVE LAKE			
Arctic Star Lodge	N/A[b]	N/A	N/A
Frontier Fishing Lodge	64	162	226
Great Slave Lake Lodge (Plummer's)	79	259	338
Indian Mountain Lodge	19	8	27
Trophy Lodge (Reliance)	17	24	41
	179	453	632
TOTAL FOR BOTH LAKES	548	1594	2142

[a] Resident of Canada.

[b] Limited operation during 1979.

Table 2. Summary of information pertaining to the operation of sport fishing lodges censused on Great Bear and Great Slave lakes, 1979.

Lodge	Guest Capacity[a]	No. of Guests		Period of Operation		
		Calculated	Licence Sales[a]	From	To	Days
GREAT BEAR LAKE						
Great Bear Lodge	46	215	226	July 15	August 25	42
GREAT SLAVE LAKE						
Trophy Lodge	16	51	56	July 7	August 26	51

[a] Figures obtained from Department of Renewable Resources, Government of Northwest Territories.

Table 3. Summary of information pertaining to the creel census period at sport fishing lodges censused on Great Bear and Great Slave lakes, 1979.

Lodge	Period of Creel Census			% of Season Censused	% of Census Period Worked	No. of Angler Interviews
	From	To	Days			
GREAT BEAR LAKE						
Great Bear Lodge	July 15	August 25	42	100	88	805
GREAT SLAVE LAKE						
Trophy Lodge	July 7	August 10	35	69	100	107

Table 4. Summary of information pertaining to the anglers' creel from lodges censused on Great Bear and Great Slave lakes, 1979.

Lodge	Species	No. Caught	No. Released	Retained		No. Sampled	Mean Wt.(kg)	Fish Retained Per Angler-day	
				No.	%			No.	Wt.(kg)
GREAT BEAR LAKE									
Great Bear Lodge	Lake trout	3080	2573	184	6	18	4.84	0.23	1.11
	Northern pike	603	592	8	1	0	-	-	-
	Arctic grayling	95	75	14	15	0	-	-	-
	Lake whitefish	1	1	0	0	0	-	-	-
GREAT SLAVE LAKE									
Trophy Lodge	Lake trout	397	295	95	24	40	2.72	0.89	2.41
	Arctic grayling	61	35	26	43	0	-	-	-

Table 5. Summary of information pertaining to the harvest of lake trout from lodges censused on Great Bear and Great Slave lakes, 1979.

Lodge		Lake Trout Caught	Lake Trout Released	Lake Trout Retained	Release Mortality	Shore Lunch	Total Number	Harvest Per Angler
GREAT BEAR LAKE								
Great Bear Lodge	No.	4597	3840	275	269	482	1026[a]	4.8[b]
	Wt.	22254	18585	1331	1302	2303	4966	23.4
GREAT SLAVE LAKE								
Trophy Lodge	No.	923	686	220	48	17	285[c]	5.6[d]
	Wt.	2511	1866	598	131	46	775	15.2

[a] Based on 215 guests present over fishing season.

[b] Based on 144 guests during creel census period.

[c] Based on 51 guests present over fishing season.

[d] Based on 22 guests during creel census period.

Table 6. Summary of information pertaining to the hours fished, angler success, and yield for lake trout from lodges censused on Great Bear and Great Slave lakes, 1979.

Lodge	Hours Fished (Lake Trout) Total	Hours Fished (Lake Trout) Per Angler-day	Lake Trout Caught Per Angler-day	Lake Trout Caught Per Angler-hour	Surface Area (ha) Available	Surface Area (ha) Utilized	Yield (kg/hectare) Area Available	Yield (kg/hectare) Area Utilized
GREAT BEAR LODGE								
Bear Island Camp	3939	4.89	3.83	0.78	16420	13985	0.3	0.4
TROPHY LODGE								
Reliance	470	4.39	3.7	0.85	9937	5957	0.08	0.1

Table 7 Harvest of lake trout from two sport fishing lodges on Great Bear and Great Slave lakes, 1971 to 1979

Lodge	Year		Lake Trout Caught	Lake Trout Released	Lake Trout Retained	Release Mortality	Shore Lunches	Total Harvested	Harvest Per Angler	Remarks
Great Bear Lodge (Neiland Bay and Bear Island)	1971[1]	No.	7780	5835	1066	408	879	2353	-	[1]Estimate based on a limited creel census
		Wt. (kg)	27931	20948	3828	1465	3155	8448	28.8	
	1972	No.	9787	7840	811	549	1120	2496	-	
		Wt. (kg)	45769	36615	3864	2563	5290	11717	34.5	-
	1973	No.	8153	6302	909	441	942	2292	-	
		Wt. (kg)	39950	30881	4453	2161	4616	11230	35.7	-
	1974[2]	No.	-	-	150	518	1089	1757	-	[2]Lake trout retained as shore lunches and trophies only
		Wt. (kg)	-	-	1498	2466	6926	10890	30 0	
	1979	No.	4597	3840	275	269	482	1026	4 8	-
		Wt. (kg)	22295	18625	1332	1303	2338	4976	23.1	
Trophy Lodge (Reliance)	1972[3]	No.	1248	980	243	69	25	337	-	[3]Based on licence sales of 36
		Wt. (kg)	1917	1505	374	105	38	517	-	
	1973[4]	No.	1567	1230	306	86	31	423	-	[4]Estimates based on catch data from 1974.
		Wt. (kg)	2437	1920	469	132	48	649	-	
	1974	No.	1600	1256	312	88	32	432	-	-
		Wt. (kg)	2457	1929	479	135	49	663	14.4	
	1979	No.	923	686	220	48	17	285	5.6	-
		Wt. (kg)	2511	1865	598	131	46	775	15.2	

Table 8. Biological data by length interval for lake trout caught by experimental nets in the vicinity of Great Bear Lodge, Great Bear Lake, 1979

Length Interval (mm)	Males N	Males Length(mm) Mean	Males Length(mm) SD	Males Weight (g) Mean	Males Weight (g) SD	Males K	Males % Mat.	Females N	Females Length(mm) Mean	Females Length(mm) SD	Females Weight (g) Mean	Females Weight (g) SD	Females K	Females % Mat	Combined N	Combined Length(mm) Mean	Combined Length(mm) SD	Combined Weight (g) Mean	Combined Weight (g) SD	Combined K	Combined % Mat.	F/M Ratio	No. Sex Unknown
150-174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	171	1 9	56	3.6	1.13	0	-	4
175-199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	181	5 4	69	12.2	1 15	0	-	7
200-224	3	208	7 6	100	0 0	1 11	0	1	223	-	125	-	1 12	0	9	211	7.3	100	12.5	1.06	0	0 3	5
225-249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	229	2 1	100	0.0	0.80	0	-	2
275-299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	296	-	275	-	1 06	0	-	1
300-324	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	303	-	300	-	1 07	0	-	1
375-399	1	385	-	575	-	1 02	0	-	-	-	-	-	-	-	1	385	-	575	-	1 02	0	-	-
425-449	-	-	-	-	-	-	-	1	431	-	950	-	1 19	0	1	431	-	950	-	1.19	0	-	-
475-499	-	-	-	-	-	-	-	1	483	-	1350	-	1.20	0	1	483	-	1350	-	1 20	0	-	-
550-574	1	568	-	2200	-	1 20	100	1	551	-	2125	-	1.27	100	2	551	-	2125	-	1 27	50	1 0	-
600-624	2	614	13.4	2950	70 7	1.28	100	1	615	-	2800	-	1 20	100	3	614	9 5	2900	100 0	1 25	100	0 5	-
625-649	2	635	3 5	2775	176 7	1 09	50	1	629	-	2900	-	1.17	100	3	633	4.0	2817	144 3	1 11	66	0.5	-
675-699	2	682	2 5	3800	494 9	1 20	100	-	-	-	-	-	-	-	2	682	2 5	3800	494 9	1 20	100	-	-
700-724	-	-	-	-	-	-	-	2	708	8.5	4300	0.0	1.21	100	2	708	8 5	4300	0 0	1 21	100	-	-
750-774	-	-	-	-	-	-	-	1	769	-	5000	-	1 10	100	1	769	-	5000	-	1 10	100	-	-
775-799	-	-	-	-	-	-	-	1	776	-	5500	-	1 18	100	1	776	-	5500	-	1 18	100	-	-
825-849	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	835	-	6200	-	1 06	100	-	-
Total	12						75	10						70	42						34	0 8	20
Mean		523	214.8	2360	1876 8	1 15			589	173.1	2935	1813 3	1.18			386	227 0	1419	1827 8	1.12			

Table 9 Biological data by length interval for lake trout from experimental nets and anglers' creel, Great Bear Lodge, Great Bear Lake, 1979

Length Interval (mm)	Males							Females							Combined								
		Length(mm)		Weight(g)			%		Length(mm)		Weight(g)			%		Length(mm)		Weight(g)			%	F/M	No. Sex
	N	Mean	SD	Mean	SD	K	Mat.	N	Mean	SD	Mean	SD	K	Mat.	N	Mean	SD	Mean	SD	K	Mat.	Ratio	Unknown
150-174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	171	1.9	56	12 5	1 13	0	-	4
175-199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	181	5 4	68	12 2	1.15	0	-	7
200-224	3	208	7.6	100	0.0	1 11	0	1	223	-	125	-	1.3	0	9	211	7.3	100	12 5	1.06	0	0.3	5
225-249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	229	2.1	100	0.0		0	-	2
275-299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	296	-	275	-	1.06	0	-	1
300-324	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	303	-	300	-	1.08	0	-	1
375-399	1	383	-	575	-	1.02	0	-	-	-	-	-	-	-	1	383	-	575	-	1.02	0	-	-
425-449	-	-	-	-	-	-	-	2	428	4.2	775	247.5	1 00	0	2	428	4.2	775	247.5	1 00	0	-	-
475-499	-	-	-	-	-	-	-	1	483	-	1350	-	1.20	0	1	483	-	1350	-	1.20	0	-	-
525-549	-	-	-	-	-	-	-	1	531	-	1550	-	1.04	0	1	531	-	1550	-	1.04	0	-	-
550-574	1	568	-	2200	-	1.20	100	1	551	-	2125	-	1.27	100	2	560	12.0	2162	53.0	1.24	100	1.0	-
600-624	2	614	13.4	2950	70.7	1.28	100	1	615	-	2800	-	1.20	100	3	614	9.5	2900	100.0	1.25	100	0.5	-
625-649	2	635	3 5	2775	176.8	1 09	50	2	637	11.3	3039	196.6	1.17	100	4	636	7.0	2907	215.7	1.13	84	1.0	-
650-674	1	666	-	3178	-	1.08	100	3	664	11.8	3488	399 0	1.19	100	4	664	9.7	3411	360.8	1.16	100	3.0	-
675-699	2	682	2.1	3800	495.0	1.20	100	-	-	-	-	-	-	-	2	682	2.1	3800	495.0	1.20	100	-	-
700-724	-	-	-	-	-	-	-	5	713	7.3	4331	125.6	1.19	100	5	713	7.3	4331	125 6	1.19	100	-	-
725-749	2	743	7 1	4822	243 2	1.18	50	-	-	-	-	-	-	-	2	743	7.1	4822	243.2	1.18	50	-	-
750-774	-	-	-	-	-	-	-	1	769	-	5000	-	1.10	100	1	769	-	5000	-	1 10	100	-	-
775-799	1	786	-	7663	-	1.58	100	1	776	-	5500	-	1.18	100	2	781	7.1	6582	1529.5	1.38	100	1.0	-
825-849	1	835	-	6200	-	1.06	100	-	-	-	-	-	-	-	1	835	-	6200	-	1.06	100	-	-
850-874	-	-	-	-	-	-	-	2	865	2.8	6594	627.0	1.02	100	2	865	2.8	6594	627 0	1 02	100	-	-
875-899	-	-	-	-	-	-	-	2	888	4.2	7909	835.8	1.13	100	2	888	4 2	7909	835.8	1.13	100	-	-
900-924	-	-	-	-	-	-	-	1	907	-	8870	-	1.19	100	1	907	-	8870	-	1.19	100	-	-
Total	16						64	24						79	80						52	1 5	20
Mean		576	208.2	3051	2192.3	1.17			689	168.0	4003	2373.1	1.14			489	255 7	2447	2524.6	1 13			

Table 10. Biological data by length interval for lake trout caught by the domestic fishery in the vicinity of Fort Franklin, Great Bear Lake, 1977 and 1978

Length Interval (mm)	Males						Females						Combined						F/M
		Length(mm)		Weight(g)				Length(mm)		Weight(g)				Length(mm)		Weight(g)			
	N	Mean	SD	Mean	SD	K	N	Mean	SD	Mean	SD	K	N	Mean	SD	Mean	SD	K	Ratio
350-374	1	360	-	600	-	1 29	-	-	-	-	-	-	1	360	-	600	-	1.29	-
375-399	-	-	-	-	-	-	1	380	-	900	-	1.64	1	380	-	900	-	1.64	-
425-449	1	435	-	1000	-	1.21	-	-	-	-	-	-	1	435	-	1000	-	1 21	-
450-474	-	-	-	-	-	-	3	465	5.0	1433	152 8	1 43	3	465	5 0	1433	152.8	1.42	-
475-499	1	485	-	1600	-	1 40	1	485	-	1600	-	1 40	2	485	0 0	1600	0.0	1 40	1 0
525-549	4	537	7 9	1925	471 6	1.23	5	535	6 6	2040	498 0	1 33	9	536	6 8	1989	459 5	1.29	1.3
550-574	7	567	4.7	2643	502.8	1 46	5	562	8.0	2360	450.6	1 33	12	565	6 5	2525	482.7	1 40	0.7
575-599	15	588	5 8	2647	258 8	1.30	5	588	6 6	2740	350 7	1.35	20	588	5 8	2670	277 4	1.31	0.3
600-624	17	609	7 2	2947	287.5	1.30	9	610	6 1	3100	543 1	1 36	26	609	6.7	3000	390.9	1.32	0.5
625-649	27	638	7 3	3504	399 5	1.35	11	638	5 5	3155	297.9	1.22	38	638	6 7	3403	402.3	1 31	0 4
650-674	16	657	5 5	3700	496 6	1 31	6	661	7 4	4117	584 5	1 43	22	658	6 2	3814	541.9	1 34	0.4
675-699	7	686	6 0	4186	693.9	1.30	7	684	6.6	3814	733.5	1 19	14	685	6 2	4000	712 5	1.24	1.0
700-724	1	718	-	3900	-	1 05	3	714	7.2	4900	624.5	1.35	4	715	6.2	4650	714 1	1 27	3.0
725-749	-	-	-	-	-	-	2	733	10.6	4550	1060.6	1 16	2	733	10 6	4550	1060 6	1.16	-
750-774	4	756	4.3	4875	298 6	1 13	2	760	14.1	4050	212 1	0.92	6	757	7 5	4600	494 0	1.06	0.5
775-799	-	-	-	-	-	-	2	798	7.8	5850	919.2	1.19	2	789	7 8	5850	919.2	1.19	-
800-824	-	-	-	-	-	-	2	816	1.4	5650	70.7	1 04	2	816	1.4	5650	70.7	1.04	-
825-849	2	825	0.0	7400	848.5	1.32	2	868	3 5	7250	1202.1	1 11	2	825	0.0	7400	848 5	1 32	1 0
850-974	2	856	0.0	6950	70 7	1.10	-	-	-	-	-	-	4	862	6 9	7100	716.5	1.11	-
875-899	1	875	-	8900	-	1.33	-	-	-	-	-	-	1	875	-	8900	-	1 32	-
900-924	1	900	-	9900	-	1 36	1	900	-	8900	-	1.22	2	900	0 0	9400	707 1	1.29	1 0
925-949	1	925	-	10400	-	1 31	-	-	-	-	-	-	1	925	-	10400	-	1.31	-
975-999	-	-	-	-	-	-	1	976	-	10900	-	1 17	1	976	-	10900	-	1.17	-
1000-1025	1	1000	-	11100	-	1 11	-	-	-	-	-	-	1	1000	-	11100	-	1 11	-
Total	109						68						177						0 6
Mean		641	89 3	3621	1681 6	1 31		645	106.5	3613	1744 4	1 28		643	95 9	3618	1701.1	1 30	

Table 11. Biological data by length interval for angled lake trout from Trophy Lodge, Great Slave Lake, 1979

Length Interval (mm)	Males N	Males Length (mm) Mean	Males Length (mm) SD	Males Weight (g) Mean	Males Weight (g) SD	Males K	Males % Mat.	Females N	Females Length (mm) Mean	Females Length (mm) SD	Females Weight (g) Mean	Females Weight (g) SD	Females K	Females % Mat	Combined N	Combined Length (mm) Mean	Combined Length (mm) SD	Combined Weight (g) Mean	Combined Weight (g) SD	Combined K	Combined % Mat.	F/M Ratio
400-424	-	-	-	-	-	-	-	1	422	-	600	-	-	0	1	422	-	600	-	-	0	-
425-449	1	442	-	800	-	-	0	-	-	-	-	-	-	-	1	442	-	800	-	-	0	-
475-499	3	486	4 9	1317	208 2	1.15	33	1	489	-	1400	-	1.19	0	4	487	4.2	1338	173 0	1 16	25	0 3
500-524	2	512	15.6	1475	176.7	1.10	0	1	507	-	1450	-	1.11	100	3	510	11.4	1467	125.8	1.10	33	0.5
525-549	2	536	5 7	1575	106.1	1 02	0	2	537	7.1	1725	247.5	1 11	50	4	537	5.3	1650	177.9	1 07	25	1 0
550-574	6	557	6 8	2175	335.8	1.25	84	1	562	-	2600	-	1.46	100	7	558	6 4	2236	346.1	1 28	86	0 2
575-599	3	583	2.5	2387	344 3	1.21	66	1	589	-	2600	-	1.27	100	4	584	3.8	2440	300.6	1.22	75	0.3
600-624	1	622	-	3550	-	1 47	100	2	609	1.4	2800	565.7	1.24	50	3	613	7.6	3050	589.5	1.31	66	2.0
625-649	1	626	-	2550	-	1 04	0	2	634	7.1	3165	459.6	-	50	3	631	6.8	2967	485.6	1.18	33	2.0
650-674	1	665	-	4000	-	1.36	100	1	658	-	3600	-	1.26	0	2	662	4.9	3800	282.8	1.31	50	1.0
675-699	1	677	-	3400	-	1 10	100	2	687	17.0	3675	318.2	1.14	100	3	684	13.3	3583	275.4	1.12	100	2 0
725-749	1	726	-	5900	-	1 54	100	-	-	-	-	-	-	-	1	726	-	5900	-	1.54	100	-
750-774	1	766	-	5700	-	1.27	100	1	762	-	5300	-	1.20	100	2	764	3.8	5500	282 8	1.23	100	1.0
800-824	1	802	-	6700	-	1.30	100	-	-	-	-	-	-	-	1	802	-	6700	-	1.30	100	-
925-949	-	-	-	-	-	-	-	1	930	-	8250	-	1.03	100	1	930	-	8250	-	1.03	100	-
Total	24						75	16						40	40						60	0 6
Mean		582	90 3	2619	1557 2	1.20			616	119.6	3034	1811.7	1.18			596	102.9	2785	1653.7	1 19		

Table 12. Biological data by length interval for lake trout caught by experimental nets in the vicinity of Reliance, Great Slave Lake, 1979

Length Interval (mm)	Males N	Males Length(mm) Mean	Males Length(mm) SD	Males Weight(g) Mean	Males Weight(g) SD	Males K	Males % Mat.	Females N	Females Length(mm) Mean	Females Length(mm) SD	Females Weight(g) Mean	Females Weight(g) SD	Females K	Females % Mat.	Combined N	Combined Length(mm) Mean	Combined Length(mm) SD	Combined Weight(g) Mean	Combined Weight(g) SD	Combined K	Combined % Mat.	F/M Ratio	No. Sex Unknown
175-199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	180	-	75	-	1 29	0	-	1
200-224	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	218	-	250	-	-	0	-	1
225-249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	235	-	300	-	-	0	-	1
275-299	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	288	5 7	425	106 0	1 60	0	-	2
300-324	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	322	-	550	-	1 64	0	-	1
325-349	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	336	-	600	-	1 60	0	-	1
350-374	1	367	-	600	-	1.21	0	-	-	-	-	-	-	-	1	367	-	600	-	1 21	0	-	-
400-424	1	411	-	100	-	-	0	2	413	12.7	825	35 4	1.17	0	3	412	9 1	883	104 1	1 26	0	2 0	-
425-449	1	445	-	1150	-	1.31	100	-	-	-	-	-	-	-	1	445	-	1150	-	1.31	100	-	-
450-474	2	463	7 1	1350	141 4	1 36	0	-	-	-	-	-	-	-	2	463	7 1	1350	141 4	1 36	0	-	-
475-499	3	490	6.1	1600	173.2	1 36	66	3	479	5 2	1383	246 6	1 26	0	6	484	7.7	1492	224 5	1 31	33	1 0	-
500-524	4	509	10 5	1600	294 3	1.21	75	1	512	-	1800	-	1 34	0	5	510	9.2	1640	270 2	1 23	0	0 2	-
525-549	8	538	6 8	2019	482 5	1 30	100	6	540	6 3	1967	175 1	1.24	66	14	539	6 5	1996	371 3	1 27	86	0 8	-
550-574	4	562	8 1	2513	440.4	1.42	75	7	561	9 7	2507	318 1	1 41	57	11	561	8 7	2509	344 8	1 42	74	1 8	-
575-599	3	577	1 7	2750	377 4	1 43	100	4	581	3 6	2713	110 9	1 38	100	7	579	3 5	2729	232 4	1 40	100	1 3	-
600-624	2	611	15 6	3275	530 3	1.43	100	1	602	-	3000	-	1 38	100	3	608	12 1	3183	407 2	1 41	100	0 5	-
625-649	-	-	-	-	-	-	-	4	636	9 9	3563	555 8	1.38	75	4	636	9 9	3563	555 8	1 38	75	-	-
650-674	1	672	-	3850	-	1 26	100	2	656	3.5	3675	176.7	1 30	0	3	661	9 8	3733	160 7	1 29	33	2 0	-
675-699	-	-	-	-	-	-	-	2	689	4 2	5000	636.4	1 52	100	2	689	4 2	5000	636 4	1 52	100	-	-
725-749	1	727	-	5300	-	1 38	100	1	745	-	5200	-	1 26	100	2	736	12 7	5250	70 7	1 32	100	1.0	-
850-874	1	854	-	7000	-	1 12	100	1	866	-	7000	-	1.08	100	2	860	8 5	7000	0 0	1 10	100	1 0	-
900-924	1	910	-	10000	-	1 33	100	-	-	-	-	-	-	-	1	910	-	10000	-	1 33	100	-	-
Total	33						79	34						59	74						72	1 0	7
Mean		555	108 5	2539	1841 1	1 33			590	89.0	2782	1335 6	1 33			539	130 4	2446	1662 5	1 38			

Table 13 Biological data by length interval for lake trout caught by experimental nets in the vicinity of Reliance, Cosmos study, Great Slave Lake, 1978

Length Interval (mm)	Males N	Males Length(mm) Mean	Males Length(mm) SD	Males Weight(g) Mean	Males Weight(g) SD	Males K	Males % Mat	Females N	Females Length(mm) Mean	Females Length(mm) SD	Females Weight(g) Mean	Females Weight(g) SD	Females K	Females % Mat	Combined N	Combined Length(mm) Mean	Combined Length(mm) SD	Combined Weight(g) Mean	Combined Weight(g) SD	Combined K	Combined % Mat	F/M Ratio	No. Sex Unknown
175-199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	177	-	50	-	0 9	0	-	1
225-249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	226	-	100	-	-	0	-	1
275-299	-	-	-	-	-	-	-	1	298	-	250	-	0 94	0	4	289	8 2	238	25 0	1 0	0	-	3
300-324	2	313	6 4	325	35.4	1 06	0	2	311	1 4	350	0.0	1 16	0	5	312	3 3	330	37 3	1 09	0	1 0	1
325-349	2	341	5 7	425	35 3	1 07	0	4	332	3 6	375	28 9	1 02	0	8	337	6 2	400	37 8	1 04	12	2 0	2
350-374	2	370	0 7	550	70 7	1 09	0	2	357	4 9	525	106 1	1 15	50	5	361	8 5	530	67 1	1 13	40	1 0	1
375-399	-	-	-	-	-	-	-	3	385	11 2	700	200 0	1.21	66	3	385	11 2	700	200 0	1 21	66	-	-
400-424	1	405	-	850	-	1 28	100	2	407	2.8	750	70 7	1.11	100	4	409	6 1	738	110 9	1 08	100	2 0	1
[illegible]	-	-	-	-	-	-	-	2	440	3 5	850	0.0	1 00	50	2	440	3 5	850	0 0	1 00	50	-	-
[illegible]	1	452	-	1350	-	1 46	0	2	456	8 5	1000	0 0	1 06	100	4	459	10 6	1275	401 0	1 32	75	2 0	1
475-499	6	489	8 9	1350	104 9	1 16	50	4	483	5 7	1200	141 4	1 07	100	10	486	7 8	1290	137 1	1 12	70	0 7	-
500-524	9	515	6 0	1639	266.7	1 20	66	4	522	1 7	1750	135.4	1 23	75	13	517	6 2	1673	234 1	1 21	62	1 0	-
525-549	13	536	8 3	1954	215 5	1 27	77	10	539	10 0	2020	283 0	1 29	90	23	537	8 9	1983	243 3	1 28	83	0 8	-
550-574	10	560	7 5	2120	201 7	1 21	60	12	560	6 8	2183	225 0	1 24	88	23	559	7 1	2152	207.5	1 23	79	1 2	1
575-599	12	585	6 5	2575	294 3	1 28	75	12	587	7 8	2717	352 5	1 34	88	24	586	7 1	2645	325 7	1 31	84	1 0	-
600-624	2	606	1 4	2575	106 1	1 16	50	7	613	6 8	2757	245 7	1 20	84	9	611	6 6	2717	230 5	1 19	78	3 5	-
625-649	2	633	10 6	3475	106 1	1 38	100	6	634	7 9	3422	120 1	1 27	100	8	633	7 8	3300	153 5	1 30	100	3 0	-
650-674	6	659	7 5	3758	386 5	1 31	84	3	660	9 2	3967	671.4	1 38	100	9	659	7 5	3827	465 8	1 33	89	0 5	-
675-699	3	683	7 5	4150	350 0	1 30	100	2	688	10 0	4200	424.3	1 29	100	5	685	7 8	4170	327 1	1 30	100	0 7	-
700-724	5	710	5 3	4830	243 9	1 35	100	2	714	5 7	4100	141 4	1 13	100	7	711	5 3	4621	412 2	1 29	100	0 4	-
725-749	1	732	-	4800	-	1 22	100	2	742	9 2	5450	70 7	1 34	100	3	738	8 5	5233	378 6	1 30	100	2 0	-
750-774	2	771	2 8	6250	353 6	1 36	100	5	761	6 5	6390	1243.1	1 45	100	7	764	7 2	6350	1027 5	1 42	100	2 5	-
775-799	3	794	3 6	6333	945 1	1 26	100	1	785	-	5300	-	1 10	100	4	792	5 4	6075	928 7	1 22	100	0 3	-
800-824	1	822	-	6900	-	1 24	100	2	815	5 7	8400	424 5	1 55	100	3	817	5 7	7900	916 5	1 45	100	2 0	-
825-849	-	-	-	-	-	-	-	4	843	5 7	8275	485 6	1 38	100	4	843	5 7	8275	485 6	1 38	100	-	-
850-874	2	855	7 1	7675	530 3	1 23	100	-	-	-	-	-	-	-	2	855	7 1	7675	530 3	1 23	100	-	-
875-899	1	887	-	8200	-	1 17	100	1	877	-	8700	-	1 29	100	2	882	7 1	8450	353 6	1 23	100	1 0	-
900-924	1	900	-	11000	-	1 51	100	2	901	0 7	8650	208 6	1 18	100	3	900	0 6	9433	1985 7	1 29	100	2 0	-
950-974	1	957	-	10100	-	1 15	100	-	-	-	-	-	-	-	1	957	-	10100	-	1 15	100	-	-
975-999	1	975	-	11800	-	1 27	100	-	-	-	-	-	-	-	1	975	-	11800	-	1 27	100	-	-
Total	89						72	97						87	198						75	1 1	12
Mean		595	134.4	3107	2306.3	1.25			583	141.9	3070	2299.6	1.25			574	148.8	2909	2310.4	1.24			

Table 14 Biological data by length interval for lake trout caught by experimental nets in the vicinity of Reliance, Great Slave Lake, 1978 and 1979

Length Interval (mm)	Males N	Males Length(mm) Mean	Males Length(mm) SD	Males Weight(g) Mean	Males Weight(g) SD	Males K	Males % Mat	Females N	Females Length(mm) Mean	Females Length(mm) SD	Females Weight(g) Mean	Females Weight(g) SD	Females K	Females % Mat	Combined N	Combined Length(mm) Mean	Combined Length(mm) SD	Combined Weight(g) Mean	Combined Weight(g) SD	Combined K	Combined % Mat	F/M Ratio	No Sex Unknown
175-199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	179	2 1	63	17 7	1 09	0	-	2
220-224	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	218	-	250	-	-	0	-	1
225-249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	231	8 4	200	141 4	1 59	0	-	2
275-299	-	-	-	-	-	-	-	1	298	-	250	-	2 94	100	6	288	6 9	300	109 5	1 25	16	-	5
300-324	2	313	6 4	325	35 3	1 06	0	2	311	1 4	350	0 0	1 16	0	6	314	5 1	367	93 1	1 18	0	1 0	2
325-349	2	341	3 7	425	35 3	1 07	0	4	332	3 6	375	28 9	1 02	25	9	337	5 8	422	75 5	1 10	11	2 0	3
350-374	3	369	1 5	567	57 7	1 13	33	2	357	4 9	525	106 1	1 15	50	6	362	8 0	542	66.5	1 14	33	0 7	1
375-399	-	-	-	-	-	-	-	3	385	11 2	700	200 0	1 21	66	3	385	11 2	700	200 0	1 21	66	-	-
400-424	2	408	4 2	925	106 1	1 36	50	4	410	8 3	788	62 9	1 14	75	7	411	7 0	800	125 8	1 16	72	2 0	1
425-449	1	445	-	1150	-	1 31	100	2	440	3 5	850	0.0	1 00	50	3	441	4 0	950	173 2	1 10	66	2 0	-
450-474	3	459	8 1	1517	305 6	1 57	100	2	456	8 5	1000	0 0	1 06	100	6	461	8 9	1300	319 4	1 34	100	0 7	1
475-499	9	489	7 5	1433	173 2	1 22	55	7	481	5 5	1278	199 7	1 15	57	16	486	7 6	1366	195.5	1 19	56	0 8	-
500-524	13	513	7 7	1627	263 5	1 20	62	5	520	4 8	1760	119 4	1 25	60	18	515	7 7	1664	236 9	1 22	61	0 4	-
525-549	21	537	7 6	1979	332 3	1 28	86	16	539	8 6	2000	243 9	1 27	81	37	538	8 1	1988	293 3	1 28	84	0 8	-
550-574	14	561	7 4	2232	326 8	1 27	64	19	560	7 8	2303	300 7	1 31	79	34	560	7 6	2268	305 7	1 29	71	1 4	1
575-599	15	584	6 7	2610	306 0	1 31	80	16	585	7 3	2716	305 9	1 35	94	31	585	7 0	2465	305 6	1 33	87	1 1	-
600-624	4	609	9 5	2925	510 7	1 29	75	8	611	7 3	2788	243 1	1 22	88	12	610	7 7	2833	336 6	1 25	84	2 0	-
625-649	2	633	10 6	3475	106 1	1 38	100	10	635	8 3	3370	372 1	1 32	90	12	634	8 2	3388	340 9	1 33	92	5 0	-
650-674	7	661	8 4	3771	354 5	1 31	86	5	658	7 2	3850	508 7	1 35	60	12	660	7 7	3804	405 3	1 32	75	0 7	-
675-699	3	683	7 5	4150	350 0	1 30	100	4	689	6 2	4600	639 0	1 41	100	7	686	6 9	4407	550 3	1 36	100	1 3	-
700-724	5	710	5 3	4830	243 9	1 35	100	2	714	5 7	4100	141 4	1 13	100	7	711	5 3	4621	412 2	1 29	100	0 4	-
725-749	2	730	3 5	5050	353 6	1 30	100	3	743	6 8	5367	152 8	1 31	100	5	737	8 8	5240	270 2	1 31	100	1 5	-
750-774	2	771	2 8	6250	353 6	1 36	100	5	761	6 5	6390	1243 2	1 45	100	7	764	7 2	6350	1027 5	1 42	100	2 5	-
775-799	3	794	3 6	6333	945 2	1 26	100	1	785	-	5300	-	1 09	100	4	792	5 4	6075	928 7	1 22	100	0 3	-
800-824	1	822	-	6900	-	1 24	100	2	815	-	8400	-	1 55	100	3	817	5 7	7900	916 5	1 45	100	2 0	-
825-849	-	-	-	-	-	-	-	4	843	5 7	8275	485 6	1 38	100	4	843	5 7	8275	485 6	1 38	100	-	-
850-874	3	854	5 0	7450	540 8	1 19	100	1	866	-	7000	-	1 08	100	4	858	7 0	7338	495 6	1 16	100	0 3	-
875-899	1	887	-	8200	-	1 17	100	1	877	-	8700	-	1 29	100	2	882	7 1	8450	353 5	1 23	100	1 0	-
900-924	2	905	7 1	10500	707 1	1 42	100	2	901	0 7	8650	2051 0	1 18	100	4	903	4 9	9575	1645 9	1 30	100	1 0	-
950-974	1	957	-	10100	-	1 15	100	-	-	-	-	-	-	-	1	957	-	10100	-	1 15	100	-	-
975-999	1	975	-	11800	-	1 27	100	-	-	-	-	-	-	-	1	975	-	11800	-	1 27	100	-	-
total	122						74	131						79	272						71	1 1	19	
Mean		585	128 8	2954	2197 5	1 27			582	130 0	2958	2090 2	1 27			564	144 6	2783	2160 4	1 28			

Table 15 Biological data by length interval for lake trout from experimental nets and anglers' creel in the vicinity of Reliance, Great Slave Lake, 1978 and 1979.

Length interval (mm)	Males							Females							Combined					
		Length(mm)		Weight(g)			%		Length(mm)		Weight (g)			%		Length(mm)		Weight(g)		
	N	Mean	SD	Mean	SD	K	Mat	N	Mean	SD	Mean	SD	K	Mat	N	Mean	SD	Mean	SD	K
175-199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	178	2.1	63	17 7	1.09
200-224	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	218	-	250	-	-
225-249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	231	6 4	200	141.4	1 59
275-299	-	-	-	-	-	-	-	1	298	-	250	-	0.95	0	6	288	6 9	300	109 5	1 25
300-324	2	313	6 4	325	35 5	1 06	0	2	311	1 4	350	0 0	1 16	0	6	314	5 1	367	93 1	1 18
325-349	2	341	5 7	425	35 3	1 07	0	4	332	3 6	375	28 9	1 02	25	9	337	5.8	422	75 5	1 10
350-374	3	369	1 5	567	57.7	1 13	33	2	357	4 9	525	106 6	1 15	50	6	362	8 0	542	66 5	1 14
375-399	-	-	-	-	-	-	-	3	385	11 2	700	200 0	1 21	33	3	385	11 2	700	200 0	1 21
400-424	4	408	4 2	925	106 1	1 36	50	5	412	8 9	750	100 0	1 07	40	8	412	7 6	775	136 3	1 11
425-449	2	444	2 1	975	247 1	1.12	50	2	440	3 5	850	0.0	1 00	50	4	442	3 3	913	160 1	1.06
450-474	3	459	8 1	1517	305 5	1 57	0	2	456	8.4	1000	0 0	1 06	100	6	461	9 0	1300	319 4	1 34
475-499	12	488	6 8	1404	180 2	1.20	50	8	482	5 8	1294	189 8	1 15	50	20	486	7 0	1360	187 5	1 18
500-524	15	513	8 2	1607	254.1	1.18	51	6	518	6 9	1708	165 6	1 23	66	21	514	8 1	1636	232 9	1 20
525-549	23	537	7 4	1944	338 2	1 26	79	18	539	8 3	1969	252 1	1 25	78	41	538	7 8	1954	300 1	1 26
550-574	20	560	7 2	2215	321 6	1.27	70	20	560	7.6	2318	300 1	1 32	80	41	560	7 4	2262	308 6	1.29
575-599	18	584	6 2	2573	313.7	1 30	78	17	586	7 2	2709	297 5	1 35	94	35	584	6 7	2638	309 2	1 32
600-624	5	611	10 2	3050	523 2	1 33	80	10	611	6 5	2790	285 6	1 23	80	15	611	7 5	2877	383 1	1.26
625-649	3	630	8 4	3167	539 3	1 26	66	12	634	7.8	3338	371 8	1 31	83	15	634	7.8	3303	393 9	1 29
650-674	8	662	7 9	3800	338 1	1 31	88	6	658	6 4	3808	466 3	1.33	66	14	660	7 2	3804	381 0	1 32
675-699	4	681	6 8	3962	471 5	1 25	100	6	688	9 0	4292	702 4	1 32	84	10	685	8.5	4160	614 1	1 29
700-724	5	710	5 3	4830	243 9	1 35	100	2	714	5 7	4100	141 4	1 12	100	7	711	5 3	4621	412 2	1 29
725-749	3	728	3 2	5333	550 7	1 38	100	3	743	6 8	5367	152 7	1 31	100	6	736	9 1	5350	361 9	1 35
750-774	3	769	3 5	6067	404 1	1 33	100	6	761	5 8	6208	1197 7	1 40	100	9	764	6.3	6161	970 7	1.38
775-799	3	794	3 6	6333	945 2	1 26	100	1	785	-	5300	-	1 10	100	4	792	5 4	6075	928 7	1 22
800-824	2	812	14 1	6800	141 4	1 27	100	2	815	5 7	8400	424 3	1 55	100	4	814	8 9	7600	959 1	1 41
825-849	-	-	-	-	-	-	-	4	843	5.7	8275	485 6	1 38	100	4	843	5 7	8275	485 6	1.38
850-874	3	855	5 0	7450	540.8	1 19	100	1	866	-	7000	-	1 08	100	4	858	7.0	7338	496 6	1 16
875-899	1	887	-	8200	-	1.17	100	1	877	-	8700	-	1 29	100	2	882	7.1	8450	353 6	1 23
900-924	2	905	7 1	10500	707 1	1 42	100	2	901	0 7	8650	2050 6	1 18	100	4	903	4 9	9575	1645 9	1 30
925-949	-	-	-	-	-	-	-	1	930	-	8250	-	1 03	100	1	930	-	8250	-	1 02
950-974	1	957	-	10100	-	1 15	100	-	-	-	-	-	-	-	1	957	-	10100	-	1 15
975-999	1	975	-	11800	-	1 27	100	-	-	-	-	-	-	-	1	975	-	11800	-	1 27
1000-1024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1006	-	-	-	-
Total	146						71	147						77	312[a]					1.26
Mean		584	123 0	2899	2104 7	1 26			586	128 9	2966	2056.2	1 26			568	140 2	2783	2100 0	

[a] Includes tagged fish, i e sex unknown

Table 16 Biological data by age group for lake trout caught by experimental nets in the vicinity of Great Bear Lodge, Great Bear Lake, 1979.

Age (yr)	Males							Females							Combined						F/M Ratio	No. Sex Unknown
		Length(mm)		Weight(g)			%		Length (mm)		Weight(g)			%		Length (mm)		Weight (g)			%		
	N	Mean	SD	Mean	SD	K	Mat.	N	Mean	SD	Mean	SD	K	Mat	N	Mean	SD	Mean	SD	K	Mat		
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	175	4 7	61	13 2	1 14	0	-	9
6	3	206	7 6	100	0.0	1 11	0	1	233	-	125	-	1 13	0	12	209	12.5	96	14 4	1 06	0	0 3	8
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	230	-	100	-	-	0	-	1
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	300	4 9	288	17.7	1 07	0	-	2
10	1	383	-	575	-	1 02	0	-	-	-	-	-	-	-	1	383	-	575	-	1 02	0	-	-
13	-	-	-	-	-	-	-	1	431	-	950	-	1 19	0	1	431	-	950	-	1.19	0	-	-
16	-	-	-	-	-	-	-	2	517	48 1	1738	548.1	1 23	50	2	517	48 1	1738	548 1	1.23	50	-	-
20	1	568	-	2200	-	1.20	100	-	-	-	-	-	-	-	1	568	-	2200	-	1 20	100	-	-
21	1	623	-	3000	-	1.24	100	-	-	-	-	-	-	-	1	623	-	3000	-	1 24	100	-	-
22	1	637	-	2650	-	1.02	100	1	615	-	2800	-	1 20	100	2	626	15 5	2725	106 1	1 11	100	1 0	-
23	-	-	-	-	-	-	-	1	629	-	2900	-	1 17	100	1	629	-	2900	-	1 17	100	-	-
24	1	632	-	2900	-	1 15	0	-	-	-	-	-	-	-	1	632	-	2900	-	1 15	0	-	-
25	1	683	-	3450	-	1 08	100	1	702	-	4300	-	1 24	100	2	693	13 4	3875	601 0	1.16	100	1 0	-
26	1	680	-	4150	-	1 32	100	1	769	-	5000	-	1 10	100	2	725	62 9	4575	601.4	1 21	100	1 0	-
27	1	604	-	2900	-	1 32	100	-	-	-	-	-	-	-	1	604	-	2900	-	1 32	100	-	-
34	-	-	-	-	-	-	-	1	714	-	4300	-	1 18	100	1	714	-	4300	-	1 18	100	-	-
37	-	-	-	-	-	-	-	1	776	-	5500	-	1 18	100	1	776	-	5500	-	1.18	100	-	-
51	1	835	-	6200	-	1 06	-	-	-	-	-	-	-	-	1	835	-	6200	-	1 06	100	-	-
Total	12						75	10						70	42						34	0 8	20
Mean	20 3[a]	523	214 9	2360	1876 8	1.15		21 8[a]	589	173 0	2935	1813 3	1 19		13 7[a]	386	227 0	1420	1827.8	1 11			

[a] Mean age

Table 17 Biological data by age group for lake trout from experimental nets and anglers' creel, Great Bear Lodge, Great Bear Lake, 1979

Age (yr)	Males N	Males Length(mm) Mean	Males Length(mm) SD	Males Weight(g) Mean	Males Weight(g) SD	Males K	Males Mat	Females N	Females Length(mm) Mean	Females Length(mm) SD	Females Weight(g) Mean	Females Weight(g) SD	Females K	Females Mat	Combined N	Combined Length(mm) Mean	Combined Length(mm) SD	Combined Weight(g) Mean	Combined Weight(g) SD	Combined K	Combined Mat	F/M Ratio	No Sex Unknown
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	175	4.7	61	13 2	1 14	0	-	9
6	3	208	7 6	100	0 0	1 11	0	1	223	-	125	-	1 13	0	12	209	12 5	96	14 4	1 06	0	0 3	8
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	230	-	100	-	-	0	-	1
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	300	4 9	288	17 7	1 07	0	-	2
10	1	383	-	575	-	1 02	0	-	-	-	-	-	-	-	1	383	-	575	-	1 02	0	-	-
11	-	-	-	-	-	-	-	1	425	-	600	-	-	0	1	425	-	600	-	-	0	-	-
13	-	-	-	-	-	-	-	1	431	-	950	-	1 19	0	1	431	-	950	-	1 19	0	-	-
16	-	-	-	-	-	-	-	2	517	48 1	1738	548 0	1 23	50	2	517	48 1	1738	548 0	1 23	50	-	-
18	-	-	-	-	-	-	-	1	531	-	1550	-	1 04	0	1	531	-	1550	-	1 04	0	-	-
20	1	568	-	2200	-	1 20	100	-	-	-	-	-	-	-	1	568	-	2200	-	1 20	100	-	-
21	1	623	-	3000	-	1 24	100	-	-	-	-	-	-	-	1	623	-	3000	-	1 24	100	-	-
22	1	637	-	2650	-	1 03	100	1	615	-	2200	-	1 20	100	2	626	15 6	2725	106 1	1 11	100	1 0	-
23	-	-	-	-	-	-	-	2	650	-	3348	-	1 21	100	2	650	29 7	3348	632 9	1 21	100	-	-
24	2	649	24 0	3039	196 6	1 11	50	1	716	-	4540	-	1 24	100	3	671	42 3	3839	877 7	1 15	66	0 5	-
25	1	683	-	3450	-	1 08	100	1	702	-	4300	-	1 24	100	2	693	13 4	3875	601 0	1 16	100	1 0	-
26	1	680	-	4150	-	1 31	100	4	694	58 7	3882	939 0	1 14	100	5	691	51 2	3936	822 0	1 18	100	4 0	-
27	1	604	-	2900	-	1 32	100	-	-	-	-	-	-	-	1	604	-	2900	-	1 32	100	-	-
28	1	748	-	4650	-	1 11	100	1	722	-	4200	-	1 12	100	2	735	18 3	4425	318 2	1 11	100	1 0	-
29	-	-	-	-	-	-	-	1	670	-	3632	-	1 21	100	1	670	-	3632	-	1 21	100	-	-
32	1	786	-	7663	-	1 58	100	-	-	-	-	-	-	-	1	786	-	7663	-	1 58	100	-	-
33	-	-	-	-	-	-	-	1	885	-	7318	-	1 06	100	1	885	-	7318	-	1 06	100	-	-
34	-	-	-	-	-	-	-	2	789	105 4	5669	1935 4	1 14	100	2	789	105 4	5669	1935 4	1 14	100	-	-
36	-	-	-	-	-	-	-	2	887	28 3	7510	1923 3	1 07	100	2	887	28 3	7510	1923 3	1 07	100	-	-
37	-	-	-	-	-	-	-	1	776	-	5500	-	1 18	100	1	776	-	5500	-	1 18	100	-	-
38	-	-	-	-	-	-	-	1	891	-	8500	-	1 20	100	1	891	-	8500	-	1 20	100	-	-
51	1	835	-	6200	-	1 06	100	-	-	-	-	-	-	-	1	835	-	6200	-	1 06	100	-	-
Total	15						66	24						79	59						49	1 6	20
Mean	21 9[a]	565	210 8	2921	2205 0	1 17		25 3[a]	669	168 0	4003	2373 1	1 14		17 8[a]	484	255 8	2404	2523 8	1 13			

[a] Mean age

Table 18 Biological data by age group for lake trout caught by the domestic fishery in the vicinity of Fort Franklin, Great Bear Lake, 1977 and 1978

Age (yr)	Males N	Males Length(mm) Mean	Males Length(mm) SD	Males Weight(g) Mean	Males Weight(g) SD	Males K	Females N	Females Length(mm) Mean	Females Length(mm) SD	Females Weight(g) Mean	Females Weight(g) SD	Females K	Combined N	Combined Length(mm) Mean	Combined Length(mm) SD	Combined Weight(g) Mean	Combined Weight(g) SD	Combined K	F/M Ratio
14	1	-	-	-	-	-	-	-	-	-	-	-	1	360	-	600	-	1 28	-
16	2	460	35 4	1300	424 3	1 31	2	463	3 5	1450	212 1	1 47	4	461	20 6	1375	287 2	1 39	1 0
17	-	-	-	-	-	-	1	380	-	900	-	1 64	1	380	-	900	-	-	-
18		-	-	-	-	-	1	530	-	1700	-	1 14	1	530	-	1700	-	1 14	-
19	2	553	31 8	1900	424 3	1 12	3	565	61 2	2233	650 6	1 24	5	560	52 0	2100	538 5	1 19	1 3
20	2	538	10 6	1750	212 1	1 12	3	520	45 8	1667	251 7	1 19	5	527	34 2	1700	212 1	1 16	1 3
21	4	580	30 8	2650	238 0	1 37	2	562	11 3	2500	707 1	1 40	6	574	25 1	2600	374 1	1 38	0 5
22	2	589	4 9	2450	70 7	1 20	3	575	59 0	2267	550 8	1 18	5	581	42 4	2340	403 7	1 19	1 3
23	13	596	29 9	2885	511 3	1 36	3	626	47 5	2767	404 1	1 17	16	601	34 1	2863	482 9	1 33	0 2
24	13	602	22 5	2954	368 8	1 35	9	588	32 0	2700	327 9	1 34	22	596	27 1	2850	367 4	1 34	0 7
25	10	621	25 9	3200	444 7	1 33	3	634	14 4	3567	152 8	1 41	13	634	23 9	3285	422 0	1 35	0 3
26	10	636	24 4	3480	656 3	1 35	8	636	29 4	3400	550 3	1 33	18	636	25 9	3444	595 3	1 34	0 8
27	9	634	28 7	3411	553 3	1 33	5	668	31 3	4300	1007 5	1 43	14	646	33 1	3728	834 3	1 36	0 6
28	8	682	53 1	4000	1007 1	1 26	5	670	51 7	3840	585 7	1 29	13	677	50 7	3938	844 1	1 27	0 6
29	6	653	17 8	3667	520 3	1 32	4	678	24 4	4150	591 6	1 34	10	663	23 3	3860	573 9	1 32	0 7
30	5	641	28 3	3340	421 9	1 27	3	663	53 5	4000	1179 0	1 35	8	649	37 6	3588	784 6	1 30	0 6
31	7	684	52 9	4257	585 5	1 34	1	680	-	-	-	1 43	8	684	47 1	4288	548 9	1 35	0 1
32	3	661	6 0	3700	700 0	1 28	3	736	87 3	4233	1234 2	1 06	6	698	69 0	4267	943 8	1 16	1 0
33	1	718	-	3900	-	1 05	1	817	-	5700	-	1 04	2	768	70 0	4800	1772 8	1 05	1 0
34	1	628	-	3400	-	1 37	2	777	9 2	4700	707 1	1 00	3	727	85 9	4267	901 8	1 13	2 0
36	2	753	145 7	5250	2333 4	1 21	-	-	-	-	-	-	2	753	145 7	5250	2333 4	1 21	-
37	-	-	-	-	-	-	1	740	-	3800	-	0 94	1	740	-	3800	-	0 93	-
38	2	530	53 0	8350	2192 0	1 28	-	-	-	-	-	-	2	863	93 0	8350	2192 0	1 28	-
39	-	-	-	-	-	-	2	830	50 2	6450	70 7	1 14	4	751	79 5	6175	1744 3	1 23	-
40	-	-	-	-	-	-	1	870	-	8100	-	1 23	2	863	9 9	7550	777 8	1 17	-
42	1	875	-	8900	-	1 33	-	-	-	-	-	-	1	875	-	8900	-	1 33	-
43	1	1000	-	11100	-	1 11	-	-	-	-	-	-	1	1000	-	11100	-	1 11	-
45	-	-	-	-	-	-	1	900	-	8900	-	1 22	1	900	-	8900	-	1 22	-
47	1	925	-	10400	-	1 31	-	-	-	-	-	-	1	925	-	10400	-	1 31	-
49	-	-	-	-	-	-	1	976	-	10900	-	1 77	1	976	-	10900	-	1 17	-
Total	109						68						177						0 6
Mean	27 0[a]	641	89 3	3621	1681 6	1 31	26 7[a]	645	106 5	3613	1744 4	1 28	26 9[a]	643	96 0	3618	1701 1	1 30	

[a] Mean age

Table 19 Biological data by age group for angled lake trout from Trophy Lodge, Great Slave Lake, 1979

Age (yr)	Males N	Males Length(mm) Mean	Males Length(mm) SD	Males Weight (g) Mean	Males Weight (g) SD	Males K	Males % Mat	Females N	Females Length(mm) Mean	Females Length(mm) SD	Females Weight (g) Mean	Females Weight (g) SD	Females K	Females % Mat	Combined N	Combined Length(mm) Mean	Combined Length(mm) SD	Combined Weight (g) Mean	Combined Weight (g) SD	Combined K	Combined % Mat	F/M Ratio
12	-	-	-	-	-	-	-	1	422	-	600	-	1 01	0	1	422	-	600	-	1 01	0	-
13	1	422	-	800	-	0 93	0	1	507	-	1450	-	1 11	100	2	475	45 9	1125	459 6	1 07	0	1 0
14	2	488	5 7	1400	212.1	1 20	50	1	532	-	1500	-	1 03	0	3	503	25 8	1450	173 2	1 15	33	0 5
16	2	582	37 4	1950	848.5	1 29	50	1	489	-	1400	-	1 20	0	3	515	34 6	1767	678 9	1 26	33	0 5
17	3	529	41 6	1717	602.8	1 13	33	-	-	-	-	-	-	-	3	529	41 6	1717	602 8	1 13	33	-
18	3	638	19 3	1717	378.6	1 12	33	3	587	24 1	2533	115 4	1 26	66	6	563	33 0	2150	488 9	1 19	50	1 0
19	2	596	43 1	2450	141 4	1 17	50	1	542	-	1900	-	1 19	100	3	578	43 4	2268	332 9	1 18	66	0 5
20	1	550	-	2000	-	1 20	100	2	633	35 3	3400	282 8	1 34	100	3	605	54 0	2933	832 7	1 30	100	2 0
21	3	626	48.6	2983	854 9	1 19	66	1	639	-	2850	-	1 09	0	4	630	40 2	2950	701 2	1 17	50	0 3
22	1	585	-	2660	-	1 33	100	-	-	-	-	-	-	-	1	585	-	2660	- -	1 33	100	-
25	1	655	-	4000	-	1 36	100	1	629	-	3500	-	1 40	100	2	647	25 5	3750	353 6	1 38	100	1 0
27	1	726	-	5900	-	1 54	100	-	-	-	-	-	-	-	1	726	-	5900	- -	1 54	100	-
28	1	766	-	5700	-	1 29	100	1	675	-	3900	-	1 27	0	2	721	64 3	4800	1272 8	1 27	50	1 0
30	1	802	-	6700	-	1 30	100	-	-	-	-	-	-	-	1	802	-	6700	- -	1 30	100	-
33	-	-	-	-	-	-	-	1	762	-	5300	-	1 20	100	1	762	-	5300	- -	1 20	100	-
35	-	-	-	-	-	-	-	1	930	-	8250	-	1 03	100	1	930	-	8250	-	1 03	100	-
Total	22						59	15						60	37						60	0 7
Mean	19 6[a]	584	94 3	2671	1613 3	1 21		20 7[a]	610	121 7	3007	1871 8	1 19		20 2[a]	594	104 5	2807	1705 5	1 20		

[a] Mean age

Table 20 Biological data by age group for lake trout caught by experimental nets in the vicinity of Reliance, Great Slave Lake, 1979

Age (yr)	Males N	Males Length(mm) Mean	Males Length(mm) SD	Males Weight(g) Mean	Males Weight(g) SD	Males K	Males % Mat.	Females N	Females Length(mm) Mean	Females Length(mm) SD	Females Weight(g) Mean	Females Weight(g) SD	Females K	Females % Mat.	Combined N	Combined Length(mm) Mean	Combined Length(mm) SD	Combined Weight(g) Mean	Combined Weight(g) SD	Combined K	Combined % Mat	F/M Ratio	No. Sex Unknown
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	180	-	75	-	1 28	0	-	1
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	227	12 0	275	35 5	-	0	-	2
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	268	5.7	425	106 1	1 77	0	-	2
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	329	9 9	575	35.5	1 61	0	-	2
11	1	367	-	600	-	1.21	0	-	-	-	-	-	-	-	1	367	-	600	-	1 21	-	-	-
12	-	-	-	-	-	-	-	1	422	-	850	-	1 13	0	1	422	-	850	-	1.13	0	-	-
13	1	411	-	1000	-	1 44	0	2	445	57.3	1175	530.3	1.29	0	3	433	44 9	1117	388 4	1 34	0	2 0	-
14	1	445	-	1150	-	1.31	100	-	-	-	-	-	-	-	1	445	-	1150	-	1 31	100	-	-
15	6	490	18.6	1475	194 3	1.26	50	2	507	43.8	1600	707.1	1 18	0	8	494	24 1	1506	318 9	1 24	40	0 3	-
16	26	535	9 9	2225	106 1	1 45	100	2	494	25.5	1650	212.1	1 37	0	4	515	28 4	1938	359 1	1 41	50	1 0	-
17	4	542	29 2	2262	485 4	1.41	75	1	536	-	1800	-	1 17	0	5	541	25 4	2170	468 5	1 36	60	0 3	-
18	2	534	1 4	1800	212 1	1 18	100	3	561	10 4	2483	202 1	1.41	66	5	550	16 5	2210	414 4	1 32	80	1 5	-
19	2	548	33.2	2075	106.1	1 29	100	3	543	11 6	1917	189.3	1 20	66	5	544	18 6	1980	168 1	1 23	80	1 5	-
20	-	-	-	-	-	-	-	3	570	18 3	2617	225.4	1 41	66	3	570	18 3	2617	225.4	1 41	66	-	-
21	-	-	-	-	-	-	-	1	566	-	3050	-	1.68	100	1	566	-	3050	-	1 68	100	-	-
22	3	574	28 8	2817	381 9	1 49	100	2	628	36.0	3275	388.9	1 33	50	5	595	40 1	3000	416 8	1 42	80	0 6	-
23	2	600	31 1	3025	883 9	1.38	100	1	579	-	2650	-	1.37	100	3	593	25 1	2900	661 4	1 37	100	0 5	-
24	1	672	-	3850	-	1.27	100	3	624	73 6	3700	1680 0	1 44	100	4	636	64 6	3738	1373.8	1 40	100	3 0	-
25	1	556	-	3100	-	1 80	100	3	623	41.1	3450	606 2	1 42	66	4	607	47 5	3363	525 0	1.51	75	3 0	-
26	-	-	-	-	-	-	-	2	668	26.2	4325	318 2	1 45	100	2	668	26.2	4325	318 2	1 45	100	-	-
27	1	727	-	5300	-	1 35	100	1	625	-	2800	-	1 15	0	2	676	72 1	4050	1767 8	1.26	50	1 0	-
28	-	-	-	-	-	-	-	1	745	-	5200	-	1 26	100	1	745	-	5200	-	1 26	100	-	-
30	1	575	-	2700	-	1.42	100	-	-	-	-	-	-	-	1	575	-	2700	-	1 42	100	-	-
33	1	854	-	7000	-	1.12	100	1	-	-	-	-	-	-	1	854	-	7000	-	1 12	100	-	-
34	1	910	-	10000	-	1 33	-	1	866	-	7000	-	1.08	100	2	888	31 1	8500	2121 3	1 20	100	1 0	-
Total	30						80	32						56	69						61	1 0	7
Mean	19 6[a]	559	112 6	2643	1898 6	1.35		20 8[a]	581	91 7	2809	1371 9	1 33		18 9[a]	540	134 7	2490	1708 0	1 39			

[a] Mean age

Table 21 Biological data by age group for lake trout caught by experimental nets in the vicinity of Reliance, Cosmos study, Great Slave Lake, 1978

Age (Yr)	Males N	Length (mm) Mean	SD	Weight (g) Mean	SD	K	% Mat	Females N	Length (mm) Mean	SD	Weight (g) Mean	SD	K	% Mat.	Combined N	Length (mm) Mean	SD	Weight (g) Mean	SD	K	% Mat	F/M Ratio	No. Sex Unknown
5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	177	–	50	–	0 90	0	–	1
8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	252	36 7	150	70 7	0 90	0	–	2
9	–	–	–	–	–	–	–	1	312	–	350	–	1 15	0	3	297	13 3	283	57 3	1 07	0	–	2
10	1	308	–	300	–	1.03	0	4	318	16 4	338	62.9	1 05	50	6	315	13 4	325	52 4	1 03	50	4.0	1
11	–	–	–	–	–	–	–	3	355	22 9	483	125 8	1 07	33	6	350	15.8	466	87 6	1 08	16	–	3
12	4	342	21 5	450	108 0	1 11	0	3	371	48 1	550	212 1	1 05	50	7	361	37 8	500	132 3	1 05	14	0 5	1
13	–	–	–	–	–	–	–	3	400	42 8	700	217 9	1 07	33	3	400	42 8	700	217 9	1 07	33	–	–
14	1	370	–	500	–	0 99	100	5	433	37 1	950	187 1	1.09	100	7	437	43 7	928 6	267 5	1 09	86	5 0	1
15	8	486	41 9	1513	400 0	1 31	40	4	471	53 3	1288	306 5	1 23	100	12	481	44 1	1438	373 6	1 29	60	0 5	–
16	7	523	30 4	1571	341 4	1 08	43	3	535	17.6	1867	332 9	1 21	100	10	527	26 7	1660	350 2	1 12	60	0 4	–
17	8	551	35 0	2093	420 4	1 24	63	4	537	22 9	1988	295.5	1 28	75	12	546	31.1	2058	372 8	1 25	66	0 5	–
18	4	548	21 5	2100	108 0	1 28	75	7	555	17 5	2229	321 3	1 30	100	11	553	18 4	2182	263.9	1 29	89	1 8	–
19	7	560	19 0	2343	277 5	1.33	86	6	554	30 1	2183	376.3	1 28	88	13	558	23 9	2269	323 1	1 30	90	0 9	–
20	2	389	111 7	2525	1378.8	1.17	50	6	597	26 8	2808	477.9	1.31	88	8	595	48 1	2738	672 3	1 28	75	3.0	–
21	3	556	34 8	2300	700 0	1 31	66	4	602	35 3	2688	686.0	1 21	75	7	582	40 4	2521	664 5	1 26	72	1 3	–
22	5	591	44 9	2650	803 9	1 25	80	6	584	25 3	2383	452.4	1.19	88	11	587	33 8	2504	616 6	1 22	78	1 2	–
23	5	624	60.8	3140	1319 6	1.23	80	4	588	26 1	2637	337 6	1 30	100	9	608	49 7	2917	991 8	1 26	89	0 8	–
24	4	678	110 1	4125	2098 2	1 24	100	5	631	50 1	3470	973.1	1 35	100	10	642	82 1	3595	1506 7	1 30	100	1 3	1
25	–	–	–	–	–	–	–	2	643	13 4	3125	106.1	1 18	100	2	643	13.4	3125	106 1	1 18	100	–	–
26	4	689	72 0	4650	1888 1	1 37	75	5	618	69 5	3260	950 9	1 36	100	9	650	75.9	3878	1525 0	1 37	89	1 3	–
27	4	663	102 1	4150	1684 2	1 37	100	3	670	78 2	4133	1709 8	1 32	100	7	666	85 3	4143	1546 9	1 35	100	0 8	–
28	4	675	105 4	4413	1826 8	1 37	100	2	757	4.9	6525	503 3	1 51	100	6	702	91.8	5117	1802 4	1 41	100	0 5	–
29	3	681	31 4	3950	492.4	1 37	100	4	770	31 5	6600	1762.6	1.43	100	7	723	64 8	5464	1908 0	1 41	100	1 3	–
30	–	–	–	–	–	–	–	1	585	–	2800	–	1 40	100	1	585	–	2800	–	1.40	100	–	–
31	1	713	–	4550	–	1.26	100	2	757	81 7	6300	3394 1	1 37	100	3	742	67 0	5717	2604 0	1 33	100	2 0	–
32	1	790	–	5600	–	1 14	100	3	789	43 7	6567	2107 9	1 31	100	4	790	35 6	6325	1787 7	1 27	100	3 0	–
33	2	764	44 5	5400	848 5	1 21	100	–	–	–	–	–	–	–	2	764	44 5	5400	848 5	1 21	100	–	–
34	1	850	–	7300	–	1.19	100	1	845	–	8100	–	1.34	100	2	848	3.5	7700	565 7	1.27	100	1 0	–
35	1	860	–	8050	–	1 27	100	2	863	20.5	8350	494 9	1 30	100	3	862	14 6	8250	390 5	1 29	100	2.0	–
36	1	900	–	11000	–	1 51	100	2	873	38 9	7600	565 7	1 16	100	3	882	31.8	8733	2003 3	1 27	100	2 0	–
37	1	887	–	8200	–	1 18	100	1	901	–	10000	–	1 38	100	2	894	9 9	9150	1343 5	1 28	100	1 0	–
38	1	957	–	10100	–	1 15	100	3	–	–	–	–	–	–	1	957	–	10000	–	1 15	100	–	–
Total	83						71	95						86	190						74	1 1	12
Mean	216[a]	594	131 8	3072	2164 8	1 26	21	2[a]	582	142 5	3031	2312.3	1 25	20	7[a]	572	148 4	2891	2255 7	1 24			

[a]Mean age

Table 22 Biological data by age group for lake trout caught by experimental nets in the vicinity of Reliance, Great Slave Lake, 1978 and 1979

Age (Yr)	Males N	Length (mm) Mean	SD	Weight (g) Mean	SD	K	% Mat	Females N	Length (mm) Mean	SD	Weight (g) Mean	SD	K	% Mat	Combined N	Length (mm) Mean	SD	Weight (g) Mean	SD	K	% Mat	F/M Ratio	No. Sex Unknown
5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	177	–	50	–	0 90	0	–	1
6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	180	–	75	–	1 29	0	–	1
7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	227	12 0	275	35 4	–	0	–	2
8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4	270	29 9	288	175 0	1 33	0	–	4
9	–	–	–	–	–	–	–	1	312	–	350	–	1.15	0	5	310	20 7	400	165 8	1 29	0	–	4
10	1	308	–	300	–	1 03	0	4	318	16.4	338	62 9	1 05	50	6	315	13 4	325	52 4	1 03	0	4 0	1
11	1	367	–	600	–	1 21	0	3	355	22 9	483	125.8	1 07	33	7	353	15 8	486	94 5	1 10	14	3 0	3
12	4	352	21 5	450	108 0	1 11	0	3	388	44 9	650	229.1	1 08	33	8	369	41 1	544	174 1	1.06	12	0 8	1
13	1	411	–	1000	–	1 44	0	5	418	48 4	890	402 1	1 16	20	6	417	43 3	908	362 5	1 20	16	5 0	–
14	2	408	53 0	825	459 6	1 15	100	5	443	37 1	950	187 1	1 08	100	8	438	40 6	957	259 7	1 11	88	2 5	1
15	14	488	32 8	1496	317 7	1.29	43	6	483	49 4	1382	427 1	1 22	66	20	486	37 2	1465	345.7	1 27	50	0 4	–
16	9	526	27 0	1717	414 6	1 17	53	5	519	28 6	1780	284 2	1 27	60	14	523	26 7	1739	362 8	1.20	57	0 6	–
17	12	548	32 1	2150	428 5	1 30	66	5	537	19 9	1950	269 3	1 26	60	17	545	28.9	2091	391 4	1 38	65	0 4	–
18	6	543	18 1	2000	200 0	1.25	84	10	557	15 4	2305	305 0	1 33	90	16	552	17 3	2191	304 0	1 30	87	1 6	–
19	9	557	21 3	2283	270 4	1 32	89	9	550	25 2	2094	339 5	1 25	78	18	554	22 9	2189	313 2	1 28	83	1 0	–
20	2	589	111 7	2525	1378 9	1.17	50	9	588	26 8	2744	405 8	1 34	78	11	588	42 7	2705	574 2	1 31	73	4 5	–
21	3	556	34 8	2300	700 0	1 31	66	5	595	34 6	2760	615 8	1 31	80	8	580	37 8	2588	642 9	1 31	75	1 7	–
22	8	585	38 4	2713	646 8	1 34	88	8	595	32 4	2606	581 5	1 22	75	16	590	34 7	2659	596 7	1 28	81	1 0	–
23	7	617	52 6	3107	1137 7	1 27	84	5	586	23 0	2640	292 4	1 31	100	12	604	44 3	2913	891 6	1 29	92	1 7	–
24	5	677	95 4	4070	1821.3	1 25	100	8	628	34 7	3556	1166 9	1.38	100	14	640	75 1	3636	1418 3	1 33	93	1 6	1
25	1	556	–	3100	–	1.60	100	5	631	31.6	3320	467 1	1 32	80	6	619	41 7	3283	427 4	1 40	88	5.0	–
26	4	689	72 0	4650	1888 1	1 37	65	7	632	62.6	3564	943 3	1 39	100	11	653	68 8	3959	1379 6	1 38	89	1 8	–
27	5	676	93 0	4380	1546 6	1 37	100	4	659	67 8	3800	1547 0	1 28	75	9	668	68.3	4122	1478.8	1 33	89	0.8	–
28	4	675	105 4	4413	1826 8	1 37	100	3	753	7 5	6083	832.0	1 42	100	7	708	85 4	5128	1645 5	1 39	100	0 8	–
29	3	661	31 4	3950	492 4	1 37	100	4	770	31 5	6600	1762 6	1 43	100	7	723	64 8	5464	1908 0	1 41	100	1 3	–
30	1	565	–	2700	–	1.42	100	1	585	–	2800	–	1 40	100	2	580	7 1	2750	70 7	1 41	100	1 0	–
31	1	713	–	4550	–	1 26	100	2	757	87 8	6300	3394 1	1 37	100	2	742	67 0	5717	2604 0	1 33	100	2 0	–
32	1	790	–	5600	–	1 14	100	3	789	43 7	6567	2107 9	1.31	100	4	790	35 7	6324	1787 7	1 27	100	3 0	–
33	3	794	61 0	5933	1101 6	1 18	100	–	–	–	–	–	–	–	3	794	61 0	5933	1101 6	1 18	100	–	–
34	2	840	42 4	8650	1909 2	1 26	100	2	856	14 8	6550	777.8	1 21	100	4	848	29.6	8100	1349 1	1 23	100	1 0	–
35	1	860	–	8050	–	1 27	100	2	863	20 5	8350	495 0	1.30	100	3	862	14 6	8250	390 5	1.29	100	2 0	–
36	1	900	–	11000	–	1 51	100	2	873	38 9	7600	565.7	1.16	100	3	882	31 8	8733	2003 3	1.27	100	2 0	–
37	1	887	–	8200	–	1 18	100	1	901	–	10100	–	1 38	100	2	894	9 9	9150	1343 5	1 38	100	1 0	–
38	1	957	–	10000	–	1 15	100	–	–	–	–	–	–	–	1	957	–	10000	–	1 15	100	–	–
Total	113						73	127						79	259						71	1 1	39
Mean	21 0[a]	585	127 5	2958	2097 7	1 28	21	1[a]	582	131 2	2775	2112 2	1.27	20	2[a]	563	145 4	2784	2127 9	1 28			

[a]Mean age

Table 23. Biological data by age group for lake trout for experimental nets and anglers' creel in the vicinity of Reliance, 1978 and 1979.

Age (Yr)	Males							Females							Combined								
		Length(mm)		Weight(g)			%		Length(mm)		Weight(g)			%		Length(mm)		Weight(g)			%	F/M	No. Sex
	N	Mean	SD	Mean	SD	K	Mat.	N	Mean	SD	Mean	SD	K	Mat.	N	Mean	SD	Mean	SD	K	Mat.	Ratio	Unknown
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	177	-	50	-	-	0	-	1
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	180	-	75	-	1.29	0	-	1
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	227	12.0	275	35.4	-	0	-	2
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	270	29.9	288	175.0	1.33	0	-	4
9	-	-	-	-	-	-	-	1	312	-	350	-	1.15	0	5	310	20.7	400	165.8	1.29	20	-	4
10	1	308	-	300	-	1.03	0	4	318	16.4	338	62.9	1.05	50	6	315	13.4	325	52.4	1.03	33	4.0	1
11	1	367	-	600	-	1.21	0	3	355	22.9	483	125.8	1.07	33	7	353	15.8	486	94.5	1.10	14	3.0	3
12	4	342	21.5	450	108.0	1.11	0	4	397	40.5	638	188.7	1.01	75	9	375	42.3	550	164.0	1.03	11	1.0	1
13	2	427	21.9	900	141.4	1.18	0	6	433	56.6	983	426.2	1.15	66	8	431	48.6	963	366.2	1.16	25	3.0	-
14	4	448	55.8	1113	442.4	1.18	75	6	458	49.1	1050	296.6	1.08	84	11	456	46.9	1091	326.2	1.12	82	1.5	1
15	14	488	32.9	1496	317.7	1.29	43	6	483	49.4	1392	427.1	1.22	66	20	486	37.2	1465	345.7	1.27	50	0.4	-
16	11	526	26.9	1759	467.3	1.19	55	6	514	28.3	1717	297.7	1.26	50	17	522	27.2	1744	405.8	1.21	49	0.5	-
17	15	544	33.5	2063	477.8	1.26	60	5	537	19.9	1950	269.3	1.26	60	20	542	30.3	2035	431.4	1.26	60	0.3	-
18	9	542	17.4	1922	272.8	1.21	66	13	564	21.2	2358	286.4	1.32	86	22	555	22.3	2180	351.1	1.27	73	1.4	-
19	11	564	28.1	2313	255.0	1.29	82	10	549	23.9	2075	325.9	1.24	80	21	557	26.6	2200	308.6	1.27	81	0.9	-
20	3	576	82.1	2350	1021	1.18	66	11	596	32.1	2864	458.3	1.34	81	14	592	43.6	2754	608.1	1.31	72	3.6	-
21	6	591	54.0	2642	792.7	1.26	66	6	602	35.8	2775	552.0	1.27	66	12	597	44.1	2708	655.0	1.26	66	1.0	-
22	9	585	35.9	2707	605.3	1.34	89	8	595	32.4	2606	581.5	1.22	75	17	589	33.6	2659	577.8	1.28	83	0.9	-
23	7	617	52.6	3107	1137.7	1.27	86	5	586	22.9	2640	292.4	1.32	80	12	604	44.3	2913	891.7	1.29	84	0.7	-
24	5	677	95.4	4070	1821.6	1.25	100	8	628	54.7	3556	1166.9	1.39	100	14	640	75.1	3636	1418.3	1.33	100	1.6	1
25	2	611	77.1	3550	636.4	1.58	100	6	631	28.3	3350	424.3	1.34	84	8	626	38.8	3400	441.6	1.40	88	3.0	-
26	4	689	72.0	4650	1888.1	1.37	75	7	632	62.6	3564	943.3	1.39	100	11	653	68.8	3959	1379.6	1.38	89	1.8	-
27	6	684	85.7	4633	1516.1	1.40	100	4	659	67.8	3800	1547.0	1.28	75	10	674	76.0	4300	1503.3	1.35	90	0.7	-
28	5	694	99.9	4670	1683.6	1.35	100	4	733	39.3	5538	1294.4	1.38	75	9	711	77.5	5056	1501.5	1.36	89	0.8	-
29	3	661	31.4	3950	492.4	1.37	100	4	770	31.5	6600	1762.6	1.43	100	7	723	64.8	5464	1908.0	1.41	100	1.3	-
30	2	689	160.5	4700	2828.4	1.36	100	1	585	-	2800	-	1.40	100	3	654	128.2	4067	2281.1	1.37	100	0.5	-
31	1	713	-	4550	-	1.26	100	2	757	87.7	6300	3394.1	1.37	100	3	742	67.0	5717	2604.0	1.33	100	2.0	-
32	1	790	-	5600	-	1.14	100	3	789	43.7	6567	2107.9	1.31	100	4	790	35.7	6325	1787.7	1.27	100	3.0	-
33	3	794	61.0	5933	1101.5	1.18	100	1	762	-	5300	-	1.20	100	4	786	52.3	5775	953.5	1.18	100	0.3	-
34	2	880	42.4	8650	1909.1	1.26	100	2	856	14.8	7550	777.8	1.21	100	4	868	29.5	8100	1349.1	1.23	100	1.0	-
35	1	860	-	8050	-	1.26	100	3	885	41.6	8316	354.7	1.21	100	4	879	36.2	8250	318.9	1.22	100	3.0	-
36	1	900	-	11000	-	1.50	100	2	873	38.9	7600	565.7	1.16	100	3	882	31.8	8733	2003.3	1.27	100	2.0	-
37	1	887	-	8200	-	1.18	100	1	901	-	10100	-	1.38	100	2	894	9.9	9150	1343.5	1.28	100	1.0	-
38	1	957	-	10100	-	1.15	100	-	-	-	-	-	-	-	1	957	-	10100	-	1.15	100	-	-
Total	135						71	142						77	296						70	1.1	19
Mean	20.8[a]	585	122.4	2911	2024.2	1.27		21.0[a]	585	130.1	2928	2082.0	1.27		20.2[a]	567	141.2	2787	2077.2	1.27			

[a] Mean age.

Table 24. Length-weight relationship summary, $\log_{10}W = a + b (\log_{10}L)$, for lake trout (unsexed) from two sport fishing lodges located on Great Bear and Great Slave lakes, 1973 to 1979.

Lake	Location	Year	Number	Y-intercept (a)	Slope (b)	SD of b (S_b)	95% C.I. of b
Great Bear Lake	Great Bear Lodge	1973	500	-4.1333	2.720	0.065	2.593 - 2.847
		1979	60	-5.1099	3.061	0.027	3.007 - 3.114
	Fort Franklin	1978	177	-4.1181	2.724	0.070	2.587 - 2.861
Great Slave Lake	Trophy Lodge-all	1978-79	312	-5.1896	3.105	0.032	3.041 - 3.168
	Creel sample	1979	40	-5.7674	3.303	0.139	3.021 - 3.584
	Gillnet sample	1978	198	-5.6019	3.252	0.030	3.192 - 3.311
	Gillnet sample	1979	74	-4.2282	2.765	0.068	2.629 - 2.900

Table 25. Annual mortality rates for lake trout from two sport fishing lodges located on Great Bear and Great Slave lakes, 1979.

	Year	Type of frequency data at age-class used	Age-classes used	Survival S	SE of S	Var. of S	Annual Mortality Rate (A) where A=1-S
GREAT BEAR LAKE							
Great Bear Lodge	1979	actual and irregular[b]	26 - 51	0.8046	0.0413	0.0017	0.1954
		moving means[c]	26 - 51	0.8014	0.0325	0.0011	0.1986
Fort Franklin[a]	1977 - 78	actual and irregular[b]	27 - 49	0.7940	0.0209	0.0004	0.2060
		moving means[c]	27 - 49	0.7864	0.0161	0.0003	0.2136
GREAT SLAVE LAKE							
Trophy Lodge (Reliance)	1979	actual and irregular[b]	19 - 38	0.8569	0.0104	0.0001	0.1431
		moving means[c]	19 - 38	0.8384	0.0091	0.0001	0.1616

[a] Samples obtained from domestic fishery.

[b] The true or actual number frequency at each age-class.

[c] Mean number frequency of two successive age-classes.

Table 26. Number and mean length by length interval for lake trout tagged in the vicinity of Trophy Lodge, Great Slave Lake and Great Bear Lodge, Great Bear Bear Lake, 1979.

Length Interval (mm)	Trophy Lodge, Great Slave Lake			Great Bear Lodge, Great Bear Lake		
		Length (mm)			Length (mm)	
	N	Mean	SD	N	Mean	SD
225-249	-	-	-	1	249	-
300-324	1	313	-	-	-	-
325-349	3	333	10.4	-	-	-
350-374	4	368	8.8	1	364	-
375-399	11	388	8.1	4	393	-
400-424	14	414	7.6	8	416	4.8
425-449	20	438	6.5	4	434	4.9
450-474	21	461	8.1	4	464	4.3
475-499	26	486	6.5	10	488	6.3
500-524	45	514	7.4	6	512	8.2
525-549	48	536	7.0	7	539	6.7
550-574	59	563	7.0	10	564	7.8
575-599	59	587	7.5	28	588	6.7
600-624	51	611	6.9	30	611	6.6
625-649	33	637	7.8	21	637	7.3
650-674	21	660	7.5	25	662	7.6
675-699	24	688	5.7	18	686	6.8
700-724	17	709	7.3	20	712	5.1
725-749	11	739	6.6	8	739	9.1
750-774	9	761	9.3	7	764	6.1
775-799	6	789	9.3	13	784	8.0
800-824	5	811	7.3	3	806	6.0
825-849	7	833	6.3	11	837	8.0
850-874	8	862	9.3	6	857	9.2
875-899	3	891	4.0	5	885	9.2
900-924	3	909	3.6	2	902	1.4
925-949	3	931	8.5	3	942	1.5
1000-1024	1	1005	-	-	-	-
1150-1174	-	-	-	1	1160	-
Total	513			256		
Mean		586	114.2		649	126.7

Table 27. Update of data on recaptured lake trout, tagged and released at sport fishing lodges on Great Bear and Great Slave lakes, 1973-79.

No.	Tagging Information: Location	Date	Length (mm)	Weight (g)	Recapture Information[a]: Location	Date	Length (mm)	Weight (g)	At Liberty: Days	Years	Distance Moved(km): Direct	By Water	Total Change(±): Length (mm)	Weight (g)	Annual Increment (±): Length (mm)	Weight (g)
1	Taltheilei Narrows	25/08/73	673	4100	Taltheilei Narrows	20/07/79	890	5440	2186	5.9	1	1	+217	+1340	+36	+ 227
2	" "	11/09/74	667	5000	" "	10/09/79	687	6400	1825	5.0	2	2	+ 20	+1400	+ 4	+ 280
3	" "	14/07/77	674	3800	" "	19/07/79	740	3800	736	2.0	0	0	+ 66	0	+33	0
4	" "	24/06/77	860	8000	" "	17/07/79	-	-	754	2.0	0	0	-	-	-	-
5	" "	25/06/77	870	9021	" "	25/06/79	870	9000	731	2.0	0	0	0	- 21	0	- 10
6	" "	26/06/77	739	6450	" "	10/09/79	740	6600	807	2.2	0	0	+ 1	+ 150	-	+ 68
7	" "	24/06/77	985	1400	" "	30/08/79	990	14500	798	2.2	0	0	+ 5	+ 500	+ 2	+ 227
8	" "	15/07/77	788	6550	Narrow Island	15/01/80	904	9100	910	2.5	35	40	+116	+2550	+46	+1020
9	" "	26/06/77	775	6700	Taltheilei Narrows	01/08/79	-	-	748	2.1	0	0	-	-	-	-
10	" "	26/06/77	640	2300	" "	01/08/79	-	-	748	2.1	0	0	-	-	-	-
11	" "	26/06/78	790	7500	Big Stone Point	01/08/79	-	-	401	1.1	35	96	-	-	-	-
12	Arctic Star Lodge	21/07/78	598	2800	Arctic Star Lodge	28/07/79	600	2800	372	1.0	5	5	+ 2	0	+ 2	0
13	Reliance	14/07/79	767	-	Maufeully Point	25/07/79	767	-	11	-	-	-	0	-	-	-
14	"	11/08/79	708	-	" "	19/08/79	708	-	8	-	-	-	0	-	-	-
15	Branson's Lodge	20/07/78	802	6700	Back Bay	22/10/79	831	6845	429	1.2	9	10	+ 29	+ 145	+24	+ 121
16	" "	21/07/78	665	2950	Branson's Lodge	24/09/79	665	3170	399	1.1	0	0	0	+ 220	0	+ 200
17	" "	21/07/78	400	700	" "	16/08/79	-	-	391	1.1	0	0	-	-	-	-
18	" "	27/07/78	560	2200	" "	22/07/79	570	2200	360	1.0	0	0	+ 10	0	+10	0

[a] Excludes recaptures in the vicinity of Plummer's Great Slave Lake Lodge, 1973-78.

Appendix 1. A description of the relative stages of maturity used for northern fish in 1972-78 and 1979.

1972 - 78[a]				1979[a]			
Sex F	Sex M	Maturity stage		Maturity stage	Female	Male	
1	6	Immature	- virgin fish, gonad thin and threadlike, often incomplete	Immature	1 - ovaries granular in texture, up to full length in body cavity, hard and triangular in shape, firm membrane; eggs distinguishable	6 - testes puttylike firmness, tubular and scalloped in shape, long and thin, and may be full length in body cavity	
2	7	Maturing	- virgin or non-virgin fish not spawning in current year, gonad full length, firm, eggs of small size, gonads partially filling body cavity	Mature	2 - current year's spawner; ovaries fill body cavity; eggs nearing full size but not loose	7 - current year's spawner; testes large and lobate; white-purplish in colour; milt not expelled by pressure	
3	8	Mature	- fish spawning in current year, gonad full size filling body cavity, eggs prominent, full size	Ripe	3 - ovaries greatly extended, fill body cavity; eggs full size; eggs expelled by slight pressure	8 - testes full size; white and lobate; milt expelled by slight pressure	
4	9	Ripe	- mature fish in spawning condition, eggs translucent, milt or eggs expelled under slight pressure	Spent	4 - spawning complete; ovaries flaccid; seed eggs apparent; presence of residual mature eggs	9 - testes flaccid with some milt, blood vessels obvious with pink-violet coloration	
5	10	Spent	- mature fish completed spawning, gonads collapsed with ruptured blood vessels prominent.	Resting	5 - non-virgin; not spawning in current year	10 - non-virgin; not spawning in current year	

[a] Fish of unknown sex were coded as 0.

Appendix 2. Surface water temperatures (°C) taken daily, using a maximum-minimum thermometer, from Great Bear Lodge, Great Bear Lake and Trophy Lodge, Great Slave Lake, 1979.

Date	Great Bear Lodge			Trophy Lodge			Date (cont'd)	Great Bear Lodge			Trophy Lodge		
	Max.	Min.	Surface	Max.	Min.	Surface		Max.	Min.	Surface	Max.	Min.	Surface
6 July	-	-	-	9	6	-	1 August	12	10	11	16	7	12
7	-	-	-	15	6	-	2	11	10	11	17	7	12
8	-	-	-	15	6	-	3	11	10	11	14	8	12
9	-	-	-	15	6	-	4	-	-	12	-	-	-
10	-	-	-	15	5	-	5	-	-	10	16	9	13
11	-	-	-	12	6	9	6	-	-	9	12	7	10
12	-	-	-	14	6	11	7	-	-	10	14	8	10
13	-	-	-	15	7	11	8	-	-	11	14	8	12
14	-	-	-	15	9	9	9	-	-	12	13	9	12
15	-	-	-	14	7	11	10	-	-	12	15	8	12
16	-	-	-	13	7	12	11	-	-	11	16	9	14
17	14	10	9	15	6	11	12	-	-	12	15	8	13
18	14	9	10	16	6	12	13	-	-	13	-	-	-
19	11	8	10	14	6	13	14	-	-	14	-	-	-
20	10	8	10	14	6	12	15	-	-	12	-	-	-
21	14	11	13	11	7	12	16	-	-	13	-	-	-
22	14	9	12	-	-	-	17	-	-	13	-	-	-
23	12	10	12	16	8	10	18	-	-	13	-	-	-
24	14	7	11	13	9	11	19	-	-	13	-	-	-
25	15	10	12	-	-	-	20	-	-	13	-	-	-
26	11	7	10	15	8	13	21	-	-	12	-	-	-
27	14	7	12	15	8	13	22	-	-	12	-	-	-
28	13	9	12	14	7	12	23	-	-	10	-	-	-
29	12	9	11	13	7	12	24	-	-	9	-	-	-
30	12	8	11	15	8	12	25	-	-	8	-	-	-
31	12	8	11	16	7	12							

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